# DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

# TECHCITY EAST CAMPUS TOWN OF ULSTER ULSTER COUNTY, NY

#### **VOLUME II – APPENDICES A-H**

LEAD AGENCY: TOWN OF ULSTER TOWN BOARD

ONE TOWN HALL DRIVE LAKE KATRINE, NY 12449

CONTACT PERSON: HON. JAMES E. QUIGLEY 3<sup>RD</sup>, SUPERVISOR

SEQRA CLASSIFICATION: TYPE 1 ACTION

APPLICANT: TECHCITY PROPERTIES, INC.

300 ENTERPRISE DRIVE KINGSTON, NY 12401

**AGENCY ACCEPTANCE DATE:** 

**PUBLIC HEARING DATE:** 

**END OF PUBLIC COMMENT:** 

LAST EDIT DATE: 11/3/10

### **APPENDICES**



# APPENDIX A REDEVELOPMENT OVERLAY DISTRICT



Shuster Associates, Inc. July 1, 2009 Revised September 20, 2009 Revised June 21, 2010 Revised June 24, 2010 Revised September 21, 2010

### **DRAFT ZONING LEGISLATION**

#### TOWN OF ULSTER

## REDEVELOPMENT OVERLAY DISTRICT (ROD)

**BE IT ENACTED** by the Town Board of the Town of Ulster as follows:

1. Section 190-6 of Chapter 190 of the Town of Ulster Code entitled "Districts Established" is hereby amended to add the following new zoning district designation:

#### **ROD** Redevelopment Overlay District

- 2. Section 190-7: The Zoning Map of the Town of Ulster, incorporated in this chapter by reference, is hereby amended to designate the following parcels, \_\_\_\_\_\_, as ROD Redevelopment Overlay District.
- 3. Chapter 190 of the Town of Ulster Code is hereby amended to add the following Section 190-12.2 to Article V entitled Use and Bulk Requirements:

#### §190-12.2 ROD Redevelopment Overlay District

In the ROD, Redevelopment Overlay District, the following regulations shall apply:

#### A. <u>District Intent and General Purpose</u>

- (1) The Town Board recognizes that certain office, manufacturing and related facilities within the Town, which are no longer utilized by their original owners or for their original purposes, can constitute a valuable economic resource for the Town, but may require changes in use, configuration or development program to be sustainable.
- (2) Through the review and approval of a redevelopment plan for a previously developed, large-scale site in the OM District, the Town Board can encourage the adaptive reuse of such a site that will generate a positive tax base, provide employment opportunities, enhance the image of the property and act to further the policies and objectives set forth in the Town of Ulster Comprehensive Plan.

- (3) Due to the size and existing layout of such sites, flexible land use patterns, shared parking strategies and design criteria may replace the standard lot and bulk requirements, yard requirements and setbacks (excepting height) of the OM District while insuring appropriate accessibility to public roads and open space.
- (4) By the establishment of appropriate conditions following the completion of the environmental review process, the Town Board can create an approval structure for individual site plan and subdivision proposals that will comprise the redevelopment of such a site.
- (5) The ROD is an overlay district intended to provide an alternative to redevelopment of the site under the existing underlying OM zoning district. The standards and procedures set forth in this Section are intended to over-ride and replace standards and procedures set forth elsewhere in this chapter unless such standards and procedures are specifically referenced or incorporated herein.

#### B. Applicability

The provisions of the ROD shall be applicable to single or contiguous sites under the same ownership or control in the OM District, as delineated on the Zoning Map of the Town of Ulster. Such site(s) must contain at least 100 acres and include existing buildings with an aggregate floor area of at least 500,000 square feet and be serviced by a municipal sewer and water..

#### C. Permitted Uses and Subdivisions

<u>Uses Permitted by Right</u>: A site subject to the provisions of the ROD may be arranged, designed or used, only for the following purposes, by right, subject to site plan approval and any conditions established, by such approval. Uses otherwise permitted in the OM District are not permitted in the ROD unless specifically set forth below:

- (1) Research facilities, manufacturing and related uses including warehousing
- (2) Professional and business offices and services
- (3) Retail and personal service establishments
- (4) Restaurants and drinking establishments
- (5) Hotels and conference centers
- (6) Health clubs and indoor recreation facilities

- (7) Schools and institutions of higher education
- (8) Customary accessory uses to other permitted uses.
- **(9)** Residential uses subject to the following:
  - (a) Such uses shall only be located on the second or third floor of buildings which contain retail, office or other permitted non-residential uses on the first (ground level) floor.
  - (b) Each dwelling unit shall have no more than two bedrooms. A one bedroom unit shall contain no less than 700 square feet of interior floor area and a two bedroom unit no less than 850 square feet.
  - (c) No dwelling unit shall be located on the same floor as or the floor below any non-residential use.
- (10) Home occupations subject to the provisions of §190-14.A
  - (10) Utility Facilities and Structures (cell tower, solar panels, co-gen).
  - (11) Parking facilities and structures

<u>Subdivisions</u>: The ROD site may be subdivided upon approval by the Planning Board, in accordance with Chapter 161, for the purposes set forth below. Any parcels created by such subdivision shall be subject to compliance with all provisions of this section and the approved Comprehensive Design Plan. (See Section F. below)

- (1) Subdivision, re-subdivision or lot line revisions to create individual parcels for permitted uses, parks and/or open space.
- (2) Subdivision to create blocks or sections for future development which may be further subdivided for the purposes set forth in item (1) above.

#### D. Application for Designation of a Redevelopment Overlay District

(1) Any owner of property, or the owner's designated representative, within the OM District which complies with Section B above may apply to the Town Board for use of the Redevelopment Overlay District provisions in lieu of the use, bulk, parking, floor area ratio and related standards in the underlying OM District. Such application shall be in accord with the standards and procedures set forth herein and shall be referred to the Town Planning Board for review and recommendations prior to final action by the Town Board.

- (2) Each application for designation of a ROD shall be accompanied by the following:
  - (a) A written analysis of the project's eligibility for the establishment of a ROD including site area and existing floor area.
  - **(b)** A location map showing the parcels requested to be included in the ROD. The map will overlay the proposed parcels on the most recent air photos of that site and illustrate the site context by including the entire area within 500 feet of the site perimeter.
  - (c) A map showing the existing conditions on the proposed parcels including existing buildings, utilities, roads, easements, public access points, drainage, topography, all known environmental factors including soils, wetlands, endangered species, historic and archeological sites, etc. To the extent available this information shall be provided for all parcels shown on the location map.
  - (d) A written overview of the proposed project including a discussion of the disposition of existing buildings, proposed mix of uses on the site, compatibility of the proposed uses with each other and the general design philosophy for the site.
  - (e) A general Comprehensive Design Plan, which sets forth the overall area, location and height of proposed buildings, the likely mix of uses, the location of proposed access points and an overview of the location and hierarchy of the internal transportation circulation system, overall demarcation of open space and buffer areas, general approach to stormwater management, landscaping and lighting. The Comprehensive Design Plan shall present proposed design objectives and standards in both text and graphics.

#### E. Criteria for Approval of a Redevelopment Overlay District

In determining whether or not to approve establishment of a ROD district, the Town Board shall consider the extent to which, the application and supporting documents satisfy the following standards and criteria.

- (1) Conforms to the applicable purposes and objectives of the Town's Zoning Law.
- (2) Conforms to the applicable goals, policies and recommendations of the Town's adopted Comprehensive Plan.
- (3) Conforms to the intent and specific purposes of this section.

- (4) Satisfies the site area and total building floor area criteria set forth in Section B above.
- (5) Demonstrates the provision of adequate public services, including emergency services and access to public transportation.
- **(6)** Demonstrates the ability to provide adequate utilities including water supply, sewage disposal and storm water management.
- (7) Establishes an architectural style of proposed buildings, including exterior design themes, and scale that is consistent with the intent and purposes of this Section.
- (8) The Comprehensive Design Plan shall establish a feasible program for redevelopment of the site, and shall consist of the following:
  - [1] A master site redevelopment plan which may be prepared at a conceptual level but, at a minimum, must specify the number and type of uses proposed for development and depict their location as well as depict the parking areas to service the proposed uses and the means of traffic circulation, both automotive and pedestrian, between and among the uses.
  - [2] The Comprehensive Design Plan need not encompass all the details required for site plan approval pursuant to Chapter 145 but shall set forth in reasonable detail the anticipated locations and sizes of all major improvements such that the Planning Board can evaluate the plan for environmental, traffic and other impacts on the Town with a view toward attaching site plan related conditions of approval which must be met at the time a detailed site plan is submitted for approval for all or any portion of the site.
  - [3] The Comprehensive Design Plan shall include a phasing plan with estimated time periods for each phase and for completion of the entire development.

The Town Board shall consider the Comprehensive Design Plan developed in accordance with the procedures set forth herein in determining whether or not to approve establishment of a ROD District. The ROD District approval shall constitute the approval of the Comprehensive Design Plan as a guide for the development and approval of site plans in the ROD District. The Town Board in approving the ROD District shall consider the recommendation of the Town Planning Board. The process for the development of a Comprehensive Design Plan shall be an iterative process between the applicant and the Town Board utilizing the criteria to be considered by the Town Board in

- approving the plan as well as those factors applicable to the Planning Board under Chapter 145.
- **F.** <u>Processing of Application</u>. An application for approval of a ROD shall be processed in accordance with the following procedure:
  - (1) <u>Submission</u>. An application for approval shall be submitted to the Town Board in accord with the timing and procedures set forth below.
  - shall require the applicant to establish an escrow account in an amount deemed sufficient to reimburse it for reasonable fees incurred by planning, engineering, legal and other consultants in connection with their review of the application. The escrow account shall be periodically replenished as necessary. The applicant shall be provided with an ongoing, detailed description of the work performed and an accounting of all disbursements from the escrow. Upon termination of the review of the application,, any remaining funds in the escrow account shall be reimbursed to the applicant. Any disputes regarding the Town's use of the applicant's escrow funds or the fees charged by the Town's consultants in reviewing the application shall be referred to the Town Supervisor for resolution. The Supervisor shall resolve any such dispute within 30 days after receiving it and provide a report of his findings.
  - (3) Public Hearing. The Town Board shall conduct a public hearing on an application for approval of a ROD, which shall be held at the time and place prescribed by the Board. Notice and conduct of any public hearing shall be in accordance with New York State Town Law. Whenever possible, the Board shall combine public hearings required under this section with other public hearings required by other federal, state and local laws.
  - (4) Referral as per <u>General Municipal Law</u>. If required, the Town Board shall refer a full statement of the application to the Ulster County Planning Board as provided for by §239-m of the New York State General Municipal Law.
  - (5) <u>Decision</u>. The Town Board shall approve, approve with conditions or deny a request for establishment of a ROD following either:
    - [1] a SEQRA determination of non-significance, or
    - [2] the issuance of a SEQRA Statement of Findings, or
    - [3] a determination that the proposed action is consistent with a previously issued SEQR Statement of Findings.

The Board's decision shall contain specific findings demonstrating the application's compliance with the criteria for approval set forth in Section E above and may include any reasonable conditions to assure conformance with the intent and objectives of this section.

(6) <u>Filing</u>. The decision of the Town Board shall be filed in the office of the Town Clerk within five business days after such decision is rendered and a copy thereof mailed to the applicant.

#### G. Time Limits.

- (1) An initial application for site plan approval of the entire site, or a section thereof, shall be submitted within two years of the establishment of the ROD. Failure to submit an application for site plan approval within that period shall render the Comprehensive Design Plan approved with the ROD null and void and of no force and effect.
- (2) Construction work must commence within three (3) years from the latest date of any final site plan approval or other required permit or approval by involved agencies. If construction does not commence within said period, then the site plan approval shall become null and void and all rights shall cease.
- (3) The Comprehensive Design Plan must be completed within the timeframe proposed by the applicant in its application at the time of approval. If the Plan is not completed within said time period or an amended time period then the approval of the Comprehensive Design Plan shall become null and void and all rights therein shall cease.
- (4) For purposes of the above provisions the term "construction work" or "construction" shall mean disturbance of the project site and continued activity to install utilities, roads or other infrastructure or the process of erecting or rehabilitating any structure in accordance with the final approved site plan. The term "final site plan approval" shall mean the signing of the site plan by the Planning Board Chairman with an endorsement by stamp or other writing indicating that the plan has received "final site plan approval" and indicating the date of such final approval.
- (5) Upon written request by the applicant, any of the time limits prescribed above may be extended by the Planning Board for good cause. Among the examples of good cause are delays occasioned by lawsuits, poor market conditions, credit market freezes, unforeseen site conditions and force majeure. The Planning Board shall not withhold such extension unless it finds that the applicant is not proceeding with due diligence or is otherwise violating the conditions upon which the approval was granted.

Extensions shall not exceed three years unless the applicant submits a written request for further extension.

(6) Within the time limits prescribed above, and for any extension period granted by the Planning Board, the Comprehensive Design Plan shall be deemed to have obtained vested rights for purposes of completing the approved development improvements notwithstanding any changes to the Zoning Law.

#### H. Conflicts.

- (1) To the extent any provision of this law, including any provision of the approved Comprehensive Design Plan conflicts with any provision of any other Article in this Chapter, the provisions of this law shall control.
- (2) The Town Board hereby declares its legislative intent to supersede any provision of any local law, rule, or regulation or provision of the law inconsistent with this local law. The provisions of law intended to be superseded include all the Town Law and any other provision of law that the Town may supersede pursuant to the Municipal Home Rule Law and the Constitution of the State of New York. The courts are directed to take notice of this legislative intent and apply it in the event the Town has failed to specify any provision of law that may require supercession. The Town Board hereby declares that it would have enacted this local law and superseded such inconsistent provision had it been apparent.

#### I. <u>DEFINITIONS</u>

The definitions contained in Section 190-4 of this Chapter shall apply to this section. In addition, as used in this section, the following definitions shall apply.

(to be inserted as required) Comprehensive Design Plan Master Site Development Plan Phasing Plan

#### 4. SEVERABILITY

If any clause, sentence, paragraph, section, article or part of this Local Law shall be adjudicated in any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section, article or part thereof

directly involved in the controversy in which such judgment shall have been rendered, and such invalidity shall not be deemed to affect the remaining portions thereof.

#### 5. **EFFECT OF AMENDMENT**

Except as herein modified, Chapter 190 of the Laws of the Town of Ulster, originally adopted as Local law No. 9 of the year 1991 and any subsequent valid amendments thereto, are hereby ratified and confirmed.

#### 6. **EFFECTIVE DATE**

This Local Law shall be effective on the date of filing with the New York Secretary of State.



# APPENDIX B INTERESTED AND INVOLVED AGENCY LIST



#### **Involved And Interested Agencies And Required Permits And Approvals**

The following permits and approvals will be required to achieve the initial actions described above or for subsequent site-specific actions to implement the development program.

#### 1. Involved Agencies

#### a. Town of Ulster Town Board

- Establishment of Redevelopment Overlay District (ROD) and amendment of Zoning Map
- Approval of specific site plans

#### b. Town of Ulster Planning Board

Approval of subdivisions

#### c. New York State Department of Environmental Conservation

- SPDES Permit
- Phase 1 RCRA Permit Modification

#### d. Ulster County Department of Public Works

Highway access approval

#### 2. Interested Agencies

Other agencies that will not grant permits or approvals but have an interest in the project include:

#### a. Town of Ulster

- (1) Building Department
- (2) Sewer Department
- (3) Water Department
- (4) Ulster Hose Company #5

#### b. Ulster County

(1) Planning Department

#### c. State, Regional Agencies and Local Agencies

- (1) New York State Department of Transportation
- (2) Hudson River Valley Greenway
- (3) City of Kingston Water Department

# APPENDIX C SEQRA DOCUMENTATION

FINAL SCOPE
FULL EAF PART 1 & 2



#### SCOPING DOCUMENT April 16, 2009

## For Preparation of a Generic Draft Environmental Impact Statement Under the New York State Environmental Quality Review Act (SEQRA)

#### TECH CITY COMPREHENSIVE DEVELOPMENT PLAN

(Proposed Mixed-Use Development on the former IBM Manufacturing Site)
Town of Ulster, Ulster County, New York

Date Scope Adopted by SEQRA Lead Agency:	April 16, 2009
Date Scope Adopted by NEPA Lead Agency:	
Name of Project:	Tech City Master Plan
Project Location:	300 Enterprise Drive Town of Ulster, Ulster County, New York
SEQRA Classification:	Type 1
Lead Agency:	Town of Ulster Town Board
Lead Agency Contacts:	Nicky B. Woerner, Town Supervisor Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449
Applicant:	Tech City Properties, Inc. 300 Enterprise Drive Kingston, New York 12401

#### **DESCRIPTION OF THE PROJECT**

The Proposed Action consists of an amendment to the Town Code to add a procedure for Town Board review and approval of a "Comprehensive Development Plan" ("CDP") for certain properties located within the Town OM Zoning District. A CDP will provide a framework for the planned redevelopment over a period of years. The Proposed Action also includes the review and approval of a Comprehensive Development Plan for the redevelopment of the East Campus of Tech City (the former IBM manufacturing property) located in the Town of Ulster, New York.

The entire Tech City property is approximately 258 acres, with the lands to the west of Enterprise Road totaling approximately 120 acres ("West Campus), and the lands to the east of Enterprise Road totaling approximately 138 acres ("East Campus"). The Proposed Action contemplates the redevelopment of only the East Campus for this Generic Draft Environmental Impact Statement ("DEIS"). The East Campus is currently improved with 20 industrial and office buildings totaling approximately 2.16 million square feet, and approximately 4,200 at-grade parking spaces. The project for which the OM District – Comprehensive Development Plan is sought is a planned, integrated, multi-use development to include light assembly, office, research and development, educational, wellness, neighborhood retail, entertainment and multi-family residential uses, along with accessory parking.

The project is proposed to include the demolition of approximately 290,000 square feet of obsolete buildings, the reuse of 558,000 square feet of two existing buildings for interior parking facilities, the continued use of 1,318,000 square feet of existing buildings, and the introduction of approximately 645,000 square feet of new buildings. Approximately 3,875 parking spaces will be located throughout the East Campus, both in covered facilities and at-grade parking lots.

Vehicular access to the center would continue to be provided from the north and west by Enterprise Drive Exit of Route 199/209 and from the east and south by Boices Lane and Morton Boulevard, incorporating the existing roadway systems surrounding the East Campus. The project also contemplates re-opening the existing driveway connection on the north side of the East Campus to Old Neighborhood Road.

#### POTENTIAL SIGNIFICANT ADVERSE IMPACTS

Potential significant adverse impacts may relate to vehicular traffic, and the extent of construction impacts on the environmental remediation of ground water contamination.

#### **GENERAL GUIDELINES**

"Scoping" means the process by which the Lead Agency identifies the potentially significant adverse impacts related to the Proposed Action that are to be addressed in the Generic Draft Environmental Impact Statement, including the content and level of detail of the analysis, the range of alternatives, the mitigation measures needed and the identification of non-relevant issues. The primary goals of scoping are to focus the generic DEIS on potentially significant adverse impacts and to eliminate consideration of those impacts that are irrelevant or non-significant. This generic DEIS will address all components of the Proposed Action including, but not limited to, the information needed to evaluate the various permits and approvals required to implement the Proposed Action.

The generic DEIS for the Tech City Comprehensive Development Plan shall cover all items in this Scoping Document. Each impact issue (e.g., traffic, utilities, land use and zoning, etc.) can be presented in a separate subsection which includes: (1) a discussion of existing conditions;

(2) potential significant impacts associated with the Proposed Action; and (3) measures designed to mitigate the identified impacts.

All discussions of mitigation measures shall consider at least those measures listed in this Scoping Document and shall clearly indicate which measures have been incorporated into the project plans. When no mitigation is needed, the generic DEIS shall so indicate. Any assumptions incorporated into assessments of impact shall be clearly identified.

Narrative discussions should be accompanied by appropriate tables, charts, graphs, and figures whenever possible. If a particular subject can be most effectively described in graphic format, the narrative discussion should merely summarize and highlight the information presented graphically. All plans and maps showing the site should include adjacent homes, other neighboring uses and structures, roads, and water bodies. The preferred Comprehensive Development Plan and the No Action Alternative should be provided at a scale of 1 inch = 200 feet. Maps at the same scale should be provided as part of the document that shows the existing characteristics of the property.

Information should be presented in a manner which can be readily understood by the public. The use of technical jargon should be avoided. When practical, impacts should be described in terms which the lay person can readily understand.

All discussions of mitigation measures should consider at least those measures mentioned in the Scoping Outline. Where reasonable and necessary, they should be incorporated into the proposed action if they are not already included. For any mitigation measures listed in this Scope Outline that are not incorporated into the Proposed Action, the reason why the Applicant considers them unnecessary should be discussed in the DGEIS

The document should be written in the third person (i.e., the terms "we" and "our" should not be used). The Applicant's conclusions and opinions, if given, should be identified as those of "the Applicant".

Any assumptions incorporated into assessments of impact should be clearly identified. In such cases, the "likely worst case" scenario analysis should also be identified and discussed.

The entire document should be checked carefully to ensure consistency with respect to the to the information presented in the various sections.

#### **INTRODUCTORY MATERIAL**

The generic DEIS should be prepared to comply with the requirements of 6 NYCRR Part 617, State Environmental Quality Review. The introductory material at the beginning of the generic DEIS should include:

- Cover Sheet stating:
  - A. Type of document (Generic Draft Environmental Impact Statement).
  - B. Date submitted and any revision dates.
  - C. Name and location of the project.
  - D. Lead Agency for the project.

Name, address and telephone number of the following person at the Lead Agency to be contacted for further information:

Nicky B. Woerner, Town Supervisor Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449

- E. Name and address of the project sponsor, and name and telephone number of a contact person representing the sponsor.
- F. Name and address of the primary preparer(s) of the generic DEIS, and name and telephone number of a contact person representing the preparer.
- G. Date of acceptance of the generic DEIS (to be inserted later).
- H. Date by which comments are to be submitted to the Lead Agency (to be inserted later).
- List of Consultants: Names, addresses and project responsibilities of all consultants who have contributed to the preparation of the generic DEIS.
- Table of Contents including:
  - A. Chapter and section headings with page numbers
  - B. List of figures
  - C. List of tables
  - D. List of appendices
  - E. List of additional volumes of the GDEIS (if any)

#### GENERIC DRAFT ENVIRONMENTAL IMPACT STATEMENT

#### I. GENERIC DEIS SUMMARY

The generic DEIS (GDEIS) shall include a summary that will provide the reader with a clear and cogent understanding of the information found elsewhere in the main body of the document. The summary shall only include information found elsewhere in the main body of the GDEIS. The summary shall include:

- A. Brief description of proposed action.
- B. Description of required permits and approvals and list of Involved Agencies.
- C. Brief listing of anticipated significant impacts and proposed mitigation measures for each impact issue discussed in the GDEIS. The presentation format shall be simple and concise.
- D. Brief description of reasonable alternatives to the proposed action or to specific elements of the action. A table, comparing each alternative relative to the various impact issues, should be included.
- E. Brief description of development thresholds for the Proposed Action.

#### II. DESCRIPTION OF PROPOSED ACTION

- A. Background
  - 1. Previous Use of the Site including the site's environmental history.

- 2. Current Use of the Site including office, commercial, industrial uses and description of the ongoing environmental investigations, studies and anticipated remediation of the ground water contamination being undertaken in collaboration with NYSDEC, IBM and the current property owner.
- 3. Existing Site Plan and Subdivision including future resubdivision
- 4. Comprehensive Plan Recommendations
- 5. Description of easements and private agreements that affect the future development and use of the site.

#### B. Site Location and Description

- 1. Provide written and graphical description of geographic boundaries of the project, including, acreage, tax identification numbers and list of abutting properties. Map the geographical boundaries of the project on local and regional scale maps. The site shall be described relative to surrounding land uses, zoning designations and other key features such as Enterprise Drive, Boices Lane, CSX rail line and other prominent natural and man-made features on and within 500 feet of the project site.
- 2. Provide a detailed description of the previous and existing use of the site with respect to the environmental setting of the site and the natural resources identified. Include use, number, size, height, operation and condition of existing on-site structures.
- 3. General description of the existing infrastructure serving the project site, including a map of surrounding areas within 500 feet of the site boundaries. Existing water supply and sewage disposal systems, site access, road networks, and storm sewers shall be mapped.
- 4. Description of access to site from Enterprise Drive and Boices Lane and immediately adjacent County and Town roadways including but not limited to Old Neighborhood Road
- 5. Identify existing zoning (OM-Office Manufacturing) and proposed zoning (OM-Comprehensive Development Plan (CDP) of site including density calculations, allowed uses and constraints.
- 6. An identification of the dimensions of the property through an existing conditions metes & bounds survey prepared by a licensed land surveyor, including any easements, rights-of-way, covenants & restrictions or agreements of record affecting the subject property. The survey will also delineate any special district boundaries and will include a calculation of the amount of restricted areas on the site, such as the acreage of easements, all regulated freshwater wetlands (i.e. State protected, Federal Jurisdictional), open space and recreation areas, streams, floodplains, and slopes equal to or greater than 15 percent.
- 7. List abutting landowners, their mailing addresses and corresponding tax parcel numbers.

#### C. Description of the Proposed Action

- 1. Proposed Zoning Amendment
  - a. Amendment to OM District to provide Comp. Dev. Plan for certain properties
  - b. Summary of CDP provisions and procedures
- 2. Proposed Comprehensive Development Plan for Tech City site
  - a. Color Illustrative Site Plan Campus Master Plan
  - b. Proposed future re-subdivision plan Sketch Parcel Layout]
  - c. Site Access and Traffic Circulation

- (1) External roads: Enterprise, Boices, Route 199/209, 9W, John Clark, etc.
- (2) Internal roads: Roads A, B, C, D & E.
- (3) All existing and proposed entrances: Enterprise, Boices & Old Neighborhood.
- (4) Vehicular, truck, movements, delivery locations
- (5) On-street parking plan.
- (6) Trail networks, pedestrian or bicycle connections (including sidewalks) within the site and to off-site locations.
- (7) Public transportation
- d. Site Design
  - (1) Reuse of areas previously occupied by buildings and parking
  - (2) Areas of new site disturbance
  - (3) Layout of buildings
    - Campus Master Plan
- e. Existing and Proposed Buildings
  - (1) Location and arrangement
  - (2) Proposed uses/reuse include maximum occupancy under use scenario
  - (3) Proposed demolition
  - (4) Proposed buildings
    - Conceptual site plan and general building design guidelines
- f. Existing and Proposed Parking
- g. Existing and Proposed Landscaping and Lighting Concept
- h. Existing and Proposed Stormwater Management
  - (1) Existing SPDES permits (if any)
- i. Utilities
  - (1) Water discuss available capacity of municipal system
  - (2) Wastewater discuss available capacity of municipal system and on-site sewage treatment plant
- j. Off-site Improvements, if any
- k. Construction plan include expected year of completion, phasing plan and construction phases such as demolition.
- D. Purpose, Need and Benefits of the Proposed Action
  - 1. Project Sponsor
  - 2. Purpose of the Proposed Action
  - 3. Need for the Proposed Action. Identify public need for the project and municipal objectives based on adopted community development plans.
  - 4. Benefits of the Proposed Action. Discuss types of industries/businesses that are likely to be attracted, job creation and other economic development objectives in relation to local and regional goals.
- E. Permits and Approvals (Involved Agencies)

Town of Ulster Town Board Attn: Nicky B. Woerner, Supervisor Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449

- Zoning Amendment OM-CDP
- Approval of CDP for Tech City

Town of Ulster Planning Board Attn: Gerard Beichert, Chairman Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449 • Subdivision - (to be determined) New York State DEC Attn: James Tierney, Assist. Comm. Division of Water 625 Broadway, 4<sup>th</sup> Floor Albany, New York 12233-3505

SPDES Permit

- Phase I RECRA Permit Modification
- Air Resources Permit
- Petroleum and/or Bulk Storage Permit

F. Involved and Interested Agencies

See attached list

Ulster County DPW Attn: David Sheeley, Commissioner Public Works Administration 315 Shamrock Lane Kingston, NY 12401

Highway Access Approval

## III. <u>EXISTING ENVIRONMENTAL CONDITIONS, POTENTIAL IMPACTS, POTENTIAL MITIGATION MEASURES</u>

For each of the different environmental issues listed below, the generic DEIS shall include a discussion of the existing conditions, the future conditions should the project not be constructed, potential significant impacts related to the project, and potential mitigation measures.

#### A. LAND USE AND ZONING

- 1. Existing Conditions
  - a. Area land use including adjacent residential, office, retail/commercial, industrial and recreational uses
  - b. Town Comprehensive Plan
  - c. Zoning Ordinance
  - d. Hudson River Valley Greenway
  - e. Ulster County Land Use Plan
- 2. Potential Impacts
  - a. Introduction of Town Code amendment to provide for a Comprehensive Development Plan ("CDP") review process
  - b. Introduction of a mix of land uses to a former single-user site and compatibility with surrounding uses
  - c. Consistency with Comprehensive Plan
  - d. Consistency with Zoning Ordinance
- 3. Potential Mitigation Measures
  - a. Establishment of development thresholds

#### B. LAND AND WATER RESOURCES

- 1. Existing Conditions
  - a. Environmental conditions
    - (1) Discuss contamination on site
    - (2) Discuss contamination impact to groundwater (plume) and subsurface soils
    - (3) Discuss current remedial activities occurring on site
    - (4) Discuss schedule for ongoing remedial activities
  - b. Existing buildings and parking including current percent cover of site.
  - c. Existing open/green space

- d. Existing soil conditions
- e. Water resources
  - (1) Groundwater
  - (2) Existing stormwater conditions
    - (a) Existing watersheds
    - (b) Existing flood zones
    - (c) Existing on-site drainage, stormwater system and discharge point(s)
    - (d) Existing MS4

#### 2. Potential Impacts

- a. Environmental
  - (1) Discuss potential impact of construction/redevelopment activities to existing contaminated soil and/or groundwater
- b. Demolition of existing buildings
  - (1) Removal of hazardous materials, if any
  - (2) Demolition of existing buildings
- c. Earthwork
  - (1) Erosion and sedimentation
  - (2) Construction of new buildings and roadway
    - (a) Soil disturbance
    - (b) Installation of underground utilities
- d. Water resources
  - (1) Groundwater conditions
  - (2) Proposed stormwater management
  - (3) Management of infiltration
- 3. Potential Mitigation Measures
  - a. Additional Environmental remediation, if applicable
  - b. Stormwater management plan conformance with Phase II Stormwater regulations
  - c. Establishment of development thresholds

#### C. SOCIOECONOMICS

- 1. Existing Conditions
  - a. Employment characteristics
  - b. Fiscal conditions
- 2. Potential Impacts
  - a. Employment characteristics
  - b. Fiscal conditions
- 3. Potential Mitigation Measures
  - a. Establishment of development thresholds

#### D. <u>COMMUNITY FACILITIES AND SERVICES</u>

The community facilities and services analysis shall review the existing capacity and staffing levels of service providers and identify fiscal concerns that may be associated with potential project impacts. The analysis will consider the following:

- 1. Existing Conditions
  - a. Educational Services
  - b. Emergency Services (police, fire, EMS)
  - c. Public Works including roads, water, sewer, sanitation facilities
  - d. Recreation and Open Space
- 2. Potential Impacts
  - a. Additional demand for educational services

- b. Additional demand for Town emergency services
- c. Additional demand for Town public works services highway department, water department, sewer department
- d. Impacts to existing open space
- 3. Potential Mitigation Measures
  - a. Establishment of development thresholds
  - b. Tax revenues

#### E. TRAFFIC AND TRANSPORTATION

- 1. Existing Conditions
  - a. Surrounding Roadways A description and traffic volume analysis of the following area roadways, at minimum, including pavement width/conditions, number of lanes, grades, parking, traffic controls and existing queuing and delays. The following intersections will be studied in detail. In addition, previous studies of Route 9W intersections will be reviewed and incorporated in the analysis:

Boices Lane/John M. Clark Drive
Boices Lane/Driveway Intersections - Tech City Site
Boices Lane/Morton Blvd.
Morton Blvd./Ulster Avenue
Enterprise Drive/Boices Lane
Enterprise Drive/NYS 199 Interchange
Enterprise Drive/ Driveway Intersections - Tech City Site
Old Neighborhood Road/John Clark Drive

- b. Graphically show all roadways in the immediate area of the site
- c. Mass Transit
- d. Pedestrian/bicycle
- e. Roadway geometry
- f. Signalization
- g. Railroad crossing
- h. Parking

#### 2. Potential Impacts

- a. Increase in operational traffic
- b. Dedication of roadways to the Town
- c. Construction traffic
- d. Parking and parking garages
- e. Future development projects
- 3. Potential Mitigation Measures
  - a. Off-site intersection/roadway improvements
  - b. Establishment of development thresholds
  - c. Roadway geometry
  - d. Pedestrian linkages via sidewalks/bikeway
  - e. Funding of improvements

#### F. <u>UTILITIES</u>

- 1. Existing Conditions
  - a. Water Supply
  - b. Sanitary Sewer municipal sewer system and on-site sewer system
  - c. Stormsewer

- d. Electric and Gas
- e. Telephone and Cable
- 2. Potential Impacts
  - a. Increase in water demand
  - b. Increase in sanitary sewer demand
- 3. Potential Mitigation Measures
  - a. Establishment of development thresholds

#### G. AESTHETIC RESOURCES

- 1. A visual analysis will be prepared to evaluate the potential visual impacts of the project, including impacts from site and building lighting. The analysis will use existing condition photographs, an illustrative site plan, other graphic representations and narrative to describe:
  - The existing visual character
  - The change in visual character as a result of the proposed project
  - Mitigation measures proposed to minimize the impacts of the proposed project such as generic design guidelines and landscaping.

#### H. FISCAL IMPACTS

- 1. Existing Conditions
- 2. Potential Impacts
- 3. Potential Mitigation Measures

#### I. HISTORIC, ARCHEOLOGICAL & CULTURAL RESOURCES

- 1. A Phase 1A Archaeological Resource Survey will be completed to evaluate the potential for archaeological resources located on, and in the vicinity of, the site.
- 2. Potential Impacts
- 3. Potential Mitigation Measures

#### J. NOISE AND AIR QUALITY

- 1. Existing conditions will be described based upon existing air quality levels available from NYSDEC and EPA. Ambient noise levels in the vicinity of the project site will be described based upon publicly available data. A list the National and State Air Quality Standards for the project area will also be provided.
- 2. Project impacts using qualitative data
- 3. Proposed Mitigation

#### **IV.** <u>ALTERNATIVES</u>

- A. No Action Alternative- Reoccupancy of existing East Campus Buildings totaling 2,164,000 sf less planned demolition of 288,000 sf of existing building space for a net useable floor area in all remaining buildings of 1,876,000 sf of floor space.
- B. Modified Industrial Plan Retain Building 1 and 3 for industrial building use and continue the south parking area as parking to support these buildings and reduce scale of the Town Center.
- C. Expanded Mixed Use Town Center within southern portion of East Campus.

#### V. <u>ADVERSE ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED</u>

#### VI. GROWTH INDUCEMENT

A. Future growth potential.

- B. Impact upon local roadways, future commercial and residential development.
- C. Other.

#### VII. <u>USE AND CONSERVATION OF ENERGY</u>

- A. The energy sources to be used if the proposed action is implemented.
- B. Increased energy consumption.
- C. Energy conservation measures.

#### VIII. IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES

#### IX. SOURCES AND BIBLIOGRAPHY

#### **X.** <u>APPENDICES</u>

- A. <u>Interested and Involved Agencies List</u>
- B. SEQR Documentation
- C. Correspondence
- D. Technical Studies
  - 1. Traffic Study
  - 2. Stormwater Management Study
  - 3. Utility Analysis

#### APPENDIX Interested and Involved Agencies List

#### 1. Involved Agencies

Town of Ulster Town Board Attn: Nicky B. Woerner, Supervisor Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449

New York State DEC Attn: James Tierney, Assist. Comm. Division of Water 625 Broadway, 4<sup>th</sup> Floor Albany, New York 12233-3505 Town of Ulster Planning Board Attn: Gerard Beichert, Chairman Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449

Ulster County DPW Attn: David Sheeley, Commissioner Public Works Administration 315 Shamrock Lane Kingston, NY 12401

Town of Ulster Water Department.

Attn: Paul Vogt, Superintendent

Lake Katrine, New York 12449

Town of Ulster Town Hall

1 Town Hall Drive

#### 2. Interested Agencies

Town of Ulster Sewer Department Attn: Corey Halwick, Superintendent Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449

Town of Ulster Building Department Attn: Stacey Ostrander, Clerk Town of Ulster Town Hall 1 Town Hall Drive Lake Katrine, New York 12449

NYSDOT Attn: Mike Cotton, P.E. Eleanor Roosevelt State Office Building 4 Burnett Boulevard Poughkeepsie, New York 12603 Ulster County Planning Department Attn: Dennis Doyle, Director 244 Fair Street P.O. Box 1800 Kingston, New York 12402

Hudson River Valley Greenway Attn: Kevin J. Plunkett, Chairman Capitol Building Capitol Station Room 254 Albany, New York 12224

City of Kingston Water Department Ulster Hose #5
Attn: Judith Hanson, Superintendent Attn: Sam Appa, Chief
P.O. Box 1537 830 Ulster Avenue
Kingston, New York 12402 Kingston, NY 12401

# APPENDIX D CORRESPONDENCE



# APPENDIX E SPDES DISCHARGE PERMIT FOR ULSTER WWTP



#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

#### State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

Industrial Code: 4952 Discharge Class (CL): 05

Toxic Class (TX): T Major Drainage Basin: 13 Sub Drainage Basin: 07 Water Index Number: H-171

Compact Area:

SPDES Number:

NY0021563

DEC Number:

3-5154-00033/00002

Effective Date (EDP): Expiration Date (ExDP):

10/1/2006 9/30/2011

Modification Dates: (EDPM) 02/01/2010

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 et.seq.)(hereinafter referred to as "the Act").

#### PERMITTEE NAME AND ADDRESS

Name: Town Of Ulster

Street: 1 Town Hall Dr.

City: Lake Katrine

Attention: Nicky Woerner, Supervisor

State:

NY

Zip Code: 12449

is authorized to discharge from the facility described below:

#### **FACILITY NAME AND ADDRESS**

Name:

Ulster Sewer District Sewage Treatment Plant

Location (C,T,V):

Ulster (T)

Facility Address:

1101 Dogwood St. Ext.

City:

Kingston

NYTM -E:

NYTM - N:

Zip Code: 12401

From Outfall No.: 001 at Latitude: 41 °

55 " & Longitude:

State: NV

22 "

into receiving waters known as:

**Esopus Creek** 

Class: B

and; (list other Outfalls, Receiving Waters, & Water Classifications)

Outfall No. 002

Description Stormwater Sampling Point #1

Latitude/Longitude 41°57'55" / 74°00'15" Receiving Stream/Class

County:

003

Stormwater Sampling Point #2

Esopus Creek via Municipal storm sewer / B

004

41°57'55" / 74°00'20"

Esopus Creek via Municipal storm sewer / B

Stormwater Sampling Point #3

41°57'56" / 74°00'23"

Esopus Creek via Municipal storm sewer / B

Ulster

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1.2(a) and 750-2.

#### DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: Ulster Sewer District

Street:

1 Town Hall Dr.

City:

Lake Katrine

State:

NY

Zip Code: 12449

Responsible Official or Agent:

Corey Halwick, Superintendent

Phone: (845) 336-6727

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

#### DISTRIBUTION:

Ulster Co DOH

C.O. BWP - Permit Coordinator RPA/RWE EPA Region II - Michelle Josilo NYSEFC

Deputy Chief Permit Administrator: Stuart M. Fox

Address: Division of Environmental Permits

625 Broadway ·

Albany, NY 12233-1750

Date:

fox

7/10

#### PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL		WASTEWATER	TYPE		RECEIVIN	G WATER	I	EFFECTIV	/E	EXF	PIRING
	for dischar	escribes the type of war ge. Examples include r, storm water, non-con	process or sar	nitary	This cell lists cluwaters of the state the listed outfall	ite to which	starts	late this pa in effect. or EDPM)	(e.g. no		nis page is n effect.
PARAMET	ER	MINIMU	ΙM		MAXIMUM		UNITS	SAMPL	E FREQ.	SAMI	PLE TYPE
e.g. pH, TR Temperature		The minimum level the maintained at all insta			aximum level that eeded at any instar		SU, °F, mg/l, etc.				
PARA- METER	EFFL	LUENT LIMIT		CAL QU LIMIT (	ANTITATION PQL)	ACTION LEVEL		UNITS	SAM FREQU		SAMPLE TYPE
d ss sv q d a: a: h o re	Note 1. The eveloped battingent of tandards, requivalent Act, or lightly standards erived bassumptions in ardness, pH af this and off ecciving standards, affine and off the ecciving standard, affine ardness, affine ardness, pH affine ardness	uired under the Clean New York State water ds. The limit has been sed on existing and rules. These iclude receiving water and temperature; rates her discharges to the	assessment, specified in to monitor the outfall that the labo complied wi assurance/quin the relevancesults that a must be repoused to deter the calculate neither lower	the analythe permite amount to this laratory are the the spatiality count method re lower orted, but mine could limit."	ytical method hit shall be used hit of the pollutant evel, provided halyst has hecified quality hitrol procedures hid. Monitoring han this level has that hot be mpliance with his PQL can be raised without a	Type I or Type II Action Le are monitoring requireme as defined below in N 2, that trig additional monitoring and permi- review wh exceeded.	vels of flomass g Tem conc Exar includer lbs/d	ide units ow, pH, i, perature, entration. inples ide µg/l,	Example include I 3/week, weekly, 2/month monthly, quarterly and year	Daily,	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

Note 1: DAILY DISCHARGE: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day. DAILY MAX: The highest allowable daily discharge. DAILY MIN: The lowest allowable daily discharge. MONTHLY AVG (daily avg): The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. RANGE: The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown. 7 DAY ARITHMETIC MEAN (7 day average): The highest allowable average of daily discharges over a calendar week. 12 MRA (twelve month rolling avg): The average of the most recent twelve month's monthly averages. 30 DAY GEOMETRIC MEAN (30 d geo mean): The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. 7 DAY GEOMETRIC MEAN (7 d geo mean): The highest allowable geometric mean of daily discharges over a calendar week.

Note 2: ACTION LEVELS: Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards. TYPE I: The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results in excess of the stated Action Level. TYPE II: The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results that show the stated action level exceeded for four of six consecutive samples, or for two of six consecutive samples by 20 % or more, or for any one sample by 50 % or more.

#### PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL No.	LIMITATIONS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	Esopus Creek	02/01/2010	9/30/2011

D. D. J. CD	ED		EFFLUENT	LIMIT			MONITO	ORING REQUIREM	MENT	S	200
PARAMET	ER				7		0 1		Loc	ation	FN
		Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf	Eff	
Flow		Monthly Average	1.6	MGD			Continuous		1	x	
BOD <sub>5</sub> (Nov 1 <sup>st</sup> – May	y 31 <sup>si</sup> )	Monthly Average	30	mg/l	400	lbs/d	1 / week	24 hr composite	x	x	1
BOD <sub>5</sub> (Nov 1 <sup>st</sup> – May	y 31 <sup>st</sup> )	7 Day Average	45	mg/l	600	lbs/d	1 / week	24 hr composite		x	
CBOD <sub>5</sub> (June 1 <sup>st</sup> – O	oct 31st)	Daily Maximum	Monitor	mg/l			1 / week	24 hr composite	x	x	1,3
UOD (June 1st - Oct	31 <sup>st</sup> )	Daily Maximum			1000	lbs/d	1 / week	Calculated		х	2
Solids, Total Susp	ended	Monthly Average	30	mg/l	400	lbs/d	1 / week	24 hr composite	x	x	1
Solids, Total Susp	ended	7 Day Average	45	mg/l	600	lbs/d	1 / week	24 hr composite		x	
Solids, Settleable		Daily Maximum	0.3	ml/l			2 / day	Grab		х	
рН		Range	6.5 – 8.5	SU			2 / day	Grab		х	
Nitrogen, Ammon (June 1 <sup>st</sup> – Oct 31 <sup>st</sup> )	ia (as N)	Monthly Average	7.0	mg/l			1 / week	24 hr composite		х	
Nitrogen, TKN (as (June 1 <sup>st</sup> – Oct 31 <sup>st</sup> )	N)	Daily Maximum	Monitor	mg/l			1 / week	24 hr composite		x	3
Effluent Disinfecti	on requir	ed: [ ] All Year [	x] Seasonal	from M	ay 1st to	Oct 31 <sup>s</sup>	ť	ė			1
Coliform, Fecal	Geo	30 Day metric Mean	200	No./ 100 ml			1 / week	Grab		х	
Coliform, Fecal	Geo	7 Day metric Mean	400	No./ 100 ml			1 / week	Grab		х	

#### FOOTNOTES:

- 1. Effluent shall not exceed 15 % of influent concentration values for following: BOD5, CBOD5, & TSS.
- Ultimate Oxygen Demand shall be computed as follows: UOD = 1.5 X CBOD<sub>5</sub> + 4.5 X TKN (Total Kjeldahl Nitrogen).
   Samples for CBOD<sub>5</sub> and TKN should be collected at the same time to calculate UOD.

### SPDES PERMIT NUMBER NY 0021563 Page 4 of 10

### ACTION LEVELS AND MONITORING

OUTFALL NUMBER	LEVELS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	Esopus Creek	02/01/2010	9/30/2011

PARAMETER	EFFLUEN	T LIMIT	MONITORING ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
PARAMETER	Monthly Avg	Daily Max	NOTION LEVEL	OMIS	TIEQUENCT.		
Copper		0.8		lbs/day	1 / month	24 hr. composite	
Lead		0.21	1 74%	lbs/day	1 / month	24 hr composite	
Bis(2-ethylhexyl)phthalate		0.38		lbs/day	1 / quarter	24 hr composite	4
Zinc			2.5	lbs/day	1 / quarter	24 hr composite	
Nickel			0.25	lbs/day	1 / quarter	24 hr composite	
WET-Acute Invertebrate			0.3	TU	1 / quarter	See Footnote	5
WET-Acute Vertebrate			0.3	TU	1 / quarter	See Footnote	5
WET-Chronic Invertebrate			5	TU	1 / quarter	See Footnote	5
Wet-Chronic Vertebrate			5	TU	1 / quarter	See Footnote	5

OUTFALL NUMBER	TYPE of DISCHARGE	RECEIVING WATER	EFFECTIVE	EXPIRING
002, 003, 004	Stormwater Runoff	Esopus Creek	02/01/2010	9/30/2011

5.5.1.47070	EFFLUENT	LIMIT	MONITORING ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
PARAMETER	Monthly Avg	Daily Max	and the state of the state of the state of the state of	UNITS	FREQUENCT	TITE	III
Chemical Oxygen Demand		C .	120	mg/l	1 / year	Grab	6
Suspended Solids, Total		Monitor		mg/l	1 / year	Grab	

Footnotes on page 5 of 11.

#### FOOTNOTES:

- 4. This is an interim limit. The final limit will be determined upon review of the results of the Short-term High Intensity Monitoring Program in this permit. See page 6 for details.
- Testing Requirements WET testing shall consist of Chronic only. WET testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be Ceriodaphnia dubia (water flea invertebrate) and Pimephales promelas (fathead minnow vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24 hr composite samples with one renewal for Acute tests and three 24 hr composite samples with two renewals for Chronic tests). The appropriate dilution series bracketing the IWC and including one exposure group of 100% effluent should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test is required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 2:1 for acute, and 4:1 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

 $\frac{\text{Monitoring Period}}{\text{Monitoring Period}} \text{ - WET testing shall be performed at the specified sample frequency during calendar years ending in } \underline{0}$ 

Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: TUa = (100)/(48 hr LC50) or (100)/(48 hr EC50) (note that Acute data is generated by both Acute and Chronic testing) and TUc = (100)/(NOEC) when Chronic testing has been performed or  $TUc = (TUa) \times (10)$  when only Acute testing has been performed and is used to predict Chronic test results, where the 48 hr LC50 or 48 hr EC50 and NOEC are expressed in % effluent. This must be done for both species and using the Most Sensitive Endpoint (MSE) or the lowest NOEC and corresponding highest TUc. Report a TUa of 0.3 if there is no statistically significant toxicity in 100% effluent as compared to control.

The complete test report including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period to the Toxicity Testing Unit. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48 hr LC50 or 48 hr EC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Reduction Evaluation (TRE) in accordance with Department guidance. If such additional testing or performance of a TRE is necessary, the permittee shall be notified in writing by the Regional Water Engineer. The written notification shall include the reason(s) why such testing or a TRE is required.

6. The COD action level is intended as a guideline for the permittee to determine the overall effectiveness of the SWPPP in controlling the discharge of pollutants to receiving waters. If exceedance of the action level occurs, the permittee shall evaluate potential sources of stormwater contaminants at the facility. Any sources of contamination that are identified must be remedied. The facility's SWPPP must be updated to reflect any revisions within 14 days of the inspection for items that can be readily resolved. If corrective actions at the facility do not result in achieving the action level, the facility must continue efforts to implement additional Best Management Practices. Failure to undertake and document the review or take the necessary corrective actions is violation of the permit.

#### SPECIAL CONDITIONS:

DISCHARGE NOTIFICATION REQUIREMENTS - Sign Maintenance: The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection. Data Retention: The permittee shall retain records for a minimum period of 5 years in accordance with 6NYCRR Part 750-1.12(b)(2) and Part 750-2.5(c)(1). These records, which include discharge monitoring reports (DMRs) and annual reports, must be retained at a repository accessible to the public. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be the business office, wastewater treatment plant, village, town, city, or county clerk's office, the local library, or other location approved by the Department.

#### SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Short-Term High-Intensity Monitoring

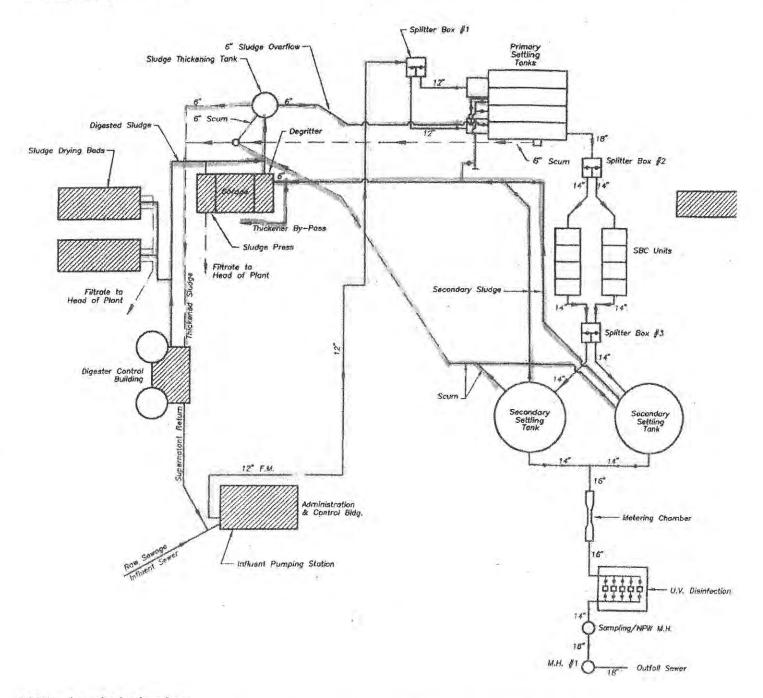
Outfall Number(s)	Compliance Action	Due Date
001	The permittee shall conduct sampling for the analysis of Bis(2-ethylhexyl)phthalate in the WWTP effluent. Sampling shall be once per week for a period of 3 months.	06/01/2010
	All sampling and analytical results, along with the average flow of each sampling event shall be submitted to the Department. After the review of the results, the Department may reopen the permit to include the quantification and removal requirement in the permit.	

The above compliance actions are one time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

- b) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
  - 1. A short description of the non-compliance;
  - 2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
  - 3. A description or any factors which tend to explain or mitigate the non-compliance; and
  - 4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- c) The permittee shall submit copies of any document required by the above schedule of compliance to NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

#### MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:



#### Additional monitoring locations:

- Outfall 002 stormwater sampling point #1 conveys stormwater from the main gate area and includes yard drains around primary clarification tanks, secondary clarification tanks, SBC, blower building, and UV building.
- Outfall 003 stormwater sampling point #2 conveys stormwater from the parking area and a portion of the control building roof drains.
- Outfall 004 stormwater sampling point #3 conveys stormwater from the parking area between the control building and digester building, digester building roof drains, and a portion of the control building roof drains.

## STORM WATER POLLUTANT PREVENTION PLAN FOR POTWs WITH STORMWATER OUTFALLS

1. <u>General</u> - The Department has determined that stormwater discharges from POTWs with design flows at or above 1 mgd shall be covered under the SPDES permit. If the permittee has already submitted a Notice of Intent to the Department for coverage under the General Storm Water permit, the permittee shall submit a Notice of Termination to the Department upon receipt of this final SPDES permit containing the requirement to develop a SWPPP.

The permittee is required to develop, maintain, and implement a Storm Water Pollutant Prevention Plan (SWPPP) to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste

disposal; and other stormwater discharges including, but not limited to, drainage from raw material storage.

The SWPPP shall be documented in narrative form and shall include the 13 minimum elements below and plot plans, drawings, or maps necessary to clearly delineate the direction of stormwater flow and identify the conveyance, such as ditch, swale, storm sewer or sheet flow, and receiving water body. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the SWPPP and may be incorporated by reference. A copy of the current SWPPP shall be submitted to the Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.

- 2. <u>Compliance Deadlines</u> The initial completed SWPPP shall be submitted by **08/01/2010** to the Regional Water Engineer. The SWPPP shall be implemented within 6 months of submission, unless a different time frame is approved by the Department. The SWPPP shall be reviewed annually and shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the SWPPP is inadequate, or (c) a letter from the Department identifies inadequacies in the SWPPP. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All SWPPP revisions (with the exception of minimum elements see item (4.B.) below) must be submitted to the Regional Water Engineer within 30 days. Note that the permittee is not required to obtain Department approval of the SWPPP (or of any minimum elements) unless notified otherwise. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
- 3. <u>Facility Review</u> The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases.

The review shall address all substances present at the facility that are identified in Tables 6-10 of SPDES application Form NY-2C (available at http://www.dec.state.ny.us/website/dcs/permits/olpermits/form2c.pdf) as well as those that are required to be monitored by the SPDES permit.

4. A. 13 Minimum elements - Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify Best Management Practices (BMPs) that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of minimum elements of the SWPPP and BMPs is available in the September 1992 manual Storm Water Management for Industrial Activities, EPA 832-R-92-006 (available on-line at http://nepis.epa.gov/pubtitleOW.htm) At a minimum, the plan shall include the following elements:

1. Pollution Prevention Team

5. Inspections and Records

9. Materials/Waste Handling, Storage, & Compatibility

2. Reporting of BMP Incidents

6. Security

10. Spill Prevention & Response

3. Risk Identification & Assessment

7. Preventive Maintenance

11. Erosion & Sediment Control

4. Employee Training

8. Good Housekeeping

12. Management Runoff

13. Street Sweeping

## STORM WATER POLLUTANT PREVENTION PLAN FOR POTWs WITH STORMWATER OUTFALLS - Continued

Note that for some facilities, especially those with few employees, some of the above may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the SWPPP that do not apply to your facility, along with an explanation, for instance if street sweeping did not apply because no streets exist at the facility.

B. Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters - As part of the erosion of and sediment control element, a SWPPP shall be developed prior to the initiation of any site disturbance of one acre or more of uncontaminated area. Uncontaminated area means soils or groundwater which are free of contamination by any toxic or non-conventional pollutants identified in Tables 6-10 of SPDES application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Engineer; nor is such discharge authorized by any SPDES general permit for stormwater discharges. SWPPPs are not required for discharges of stormwater from construction activity to groundwaters.

The SWPPP shall conform to the New York Standards and Specifications for Erosion and Sediment Control and New York State Stormwater Management Design Manual, unless a variance has been obtained from the Regional Water Engineer, and to any local requirements. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity at least 30 days prior to soil disturbance. The SWPPP shall also be submitted to the Regional Water Engineer if contamination, as defined above, is involved and the permittee must obtain a determination of any SPDES permit modifications and/or additional treatment which may be required prior to soil disturbance. Otherwise, the SWPPP shall be submitted to the Department only upon request. When a SWPPP is required, Notice properly completed a Intent (NOI) form shall submitted www.dec.state.ny.us/website/dow/toolbox/swforms.html) prior to soil disturbance. Note that submission of a NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges, nor are any additional permit fees incurred. SWPPPs must be developed and submitted for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.

### MERCURY MINIMIZATION PROGRAM

The permittee shall inspect each tributary dental facility at least once every five years to verify compliance with the wastewater treatment and notification elements of 6NYCRR Part 374.4. Inspection and/or outreach to other industrial/commercial sectors which may contribute mercury is also recommended. All new or increased tributary discharges, including hauled wastes, which are from sources that are industrial in nature must be evaluated for mercury content and if levels exceed 500 ng/L then authorization must be obtained from the Department prior to acceptance. A file shall be maintained containing the notices submitted by dental offices and all other pertinent information. This file shall be available for review by DEC representatives and copies shall be provided upon request. Note that a permit modification may be necessary to include more stringent requirements for POTWs which do not maintain low mercury effluent levels.

#### RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

a) The permittee shall also refer to 6 NYCRR Part 750-1.2(a) and 750-2 for additional information concerning monitoring and reporting requirements and conditions.
 b) The monitoring information required by this permit shall be summarized, signed and retained for a period of five years from the

required by this permit shall be summarized and reported by submitting;

date of the sampling for subsequent inspection by the Department or its designated agent. Also, monitoring information

- (if box is checked) completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.
- (if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 and must summarize information for January to December of the previous year in a format acceptable to the Department.
- x (if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:

  x Regional Water Engineer and/or County Health Department or Environmental Control Agency specified below

Send the DMRs with original signatures to:

Department of Environmental Conservation Division of Water Bureau of Water Compliance Programs 625 Broadway, 4<sup>th</sup> floor Albany, New York 12233-3506

Phone: (518) 402-8177

Send a copy of each DMR page to:

Department of Environmental Conservation John Sansalone 21 South Putt Corners Road New Paltz, New York 12561-1696

Phone: (914) 428-3019

- c) Noncompliance with the provisions of this permit shall be reported to the Department as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2.
- d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- e) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording of the data on the Discharge Monitoring Reports.
- f) Calculation for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- g) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- h) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section five hundred two of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be sent to the Environmental Laboratory Accreditation Program, New York State Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockefeller Empire State Plaza, Albany, New York 12201.

# APPENDIX F PHASE 1A – ARCHEOLOGICAL STUDY BY JOE DIAMOND



#### PHASE 1A LITERATURE REVIEW AND ARCHAEOLOGICAL SENSITIVITY

#### PROPOSED TECH CITY ADDITIONS

**BOICES LANE and ENTERPRISE DRIVE** 

TOWN OF ULSTER, ULSTER CO., NY

PREPARED FOR:

MR. NICK WOERNER,

SUPERVISOR,

TOWN OF ULSTER

TOWN OF ULSTER TOWN HALL

1 TOWN HALL DRIVE

LAKE KATRINE, NY 12449

MAY 30th, 2009

PREPARED BY: JOSEPH E. DIAMOND, Ph.D.
290 OLD ROUTE 209,
HURLEY, N.Y. 12443
845-338-0091



# New York State Office of Parks, Recreation and Historic Preservation Historic Preservation Field Services Bureau

Historic Preservation Field Services Bureau
Peebles Island Resource Center, PO Box 189, Waterford, NY 12188-0189 (Mail)
Delaware Avenue, Cohoes 12047 (Delivery)

(518) 237-8343

### PROJECTS REVIEW COVERSEORM

Rev. 10-0

Please complete this form and attach it to the top of any and all information submitted to this office for review.

Accurate and complete forms will assist this office in the timely processing and response to your request.

PROJECT NUMBERPR Review (PR continue unl	numbe	r assigned	by this office	previous Project you do not need to ion below has
COUNTY Ulster				
If you have checked this box you will need to complete ALL of the following information.				
Project Name Tech City GELS				
Location Externise Drive You MUST include street number, street name and/or County, State or Interstate roo	ute nun	nber if ap	oplicable	_
City/Town/Village Town Ser MSP/ List the correct municipality in which your project is being undertaken. If in a hamlet you must also	provid	e the na	me of the to	own.
County USEV				
If your undertaking* covers multiple communities/countles please attach a list defining all	munici	palities/c	ounties incl	luded.
YPE OF REVIEW REQUIRED/REQUESTED (Please answer both questions)				
Does this action involve a permit approval or funding, now or ultimately from any other government	ntal ag	ency?		
□ No ▼ Yes				
If Yes, list agency name(s) and permit(s)/approval(s)				
Agency involved Type of permit/approval			State	Federal
SEQRA				
Have you consulted the NYSHPO web site at http://www.nysparks.state.ny.us/shpo				
to determine the preliminary presence or absence of previously identified cultural resources within or adjacent to the project area? If yes:	X	Yes	☐ No	
Was the project site wholly or partially included within an identified archeologically sensitive area?	N	Yes	☐ No	
Does the project site involve or is it substantially contiguous to a property listed or recommended for listing in the NY State or National Registers of Historic Places?		Yes	₩ No	
ONTACT PERSON FOR PROJECT				
ame Dan Shuster Title Planning Com	sul	tant		
irm/Agency Shuster Associates				
ddress 3578 Atword Road city Stru Ridge s	TATE	W	Zip	12484
TODE ( D ( ) ) W G [ O ( ) D C			wteras	socialing
one (013) @ 61 0130 Fax (013) @ 61 0011 E-Mail			iusteras	socialta

#### Table of Contents

#### Phase 1A Archaeological Survey

Management Summary	1
Introduction	2
Environmental/Physical Setting	2
Background Research	2
Prehistoric Archaeological Sites	2
Historic Archaeological Sites	3
Sensitivity Assessment	
Prehistoric	3
Historic	3
Recommendations	4
References	5

#### MAPS

- 1. New York State.
- 2. U.S.G.S. Kingston West and East Quadrangles.
- 3. Project Map. Existing Conditions. (Provided by Divney, Tung and Schwalbe 1/27/09.)
- 4. Comprehensive Development Plan. (Provided by Divney, Tung and Schwalbe 1/27/09.)
- 5. Ulster County Soils Map (Sheet 54).
- 6. 1853 Brink and Tillson Map.
- 7. 1875 Beers Atlas of Ulster County.
- 8. 1891 Beers Atlas of the Hudson Valley from New York City to the Troy Dam.
- 9. Project map showing photograph locations.
- 10. Project map showing recommended testing procedure by area.

#### **PHOTOGRAPHS**

- 1. Parking lot in NW corner of project area. View NW.
- 2. Parking lot in NW corner of project area. View N.
- 3. Parking lot in SE corner of project area. View E.
- 4. Large lawn in SE corner of project area. View N.
- 5. Large lawn in SE corner of project area. View NW.
- Graveyard on Old Neighborhood Road. View N.

#### TABLES

1. Listed sites at NYSM and OPRHP.

#### CULTURAL RESOURCE INVESTIGATION

#### Management Summary

SHPO: Project Review #:

Involved State and Federal Agencies: SEQRA

Phase of Survey: Phase 1A

Location Information:

TOTAL Survey Area (Metric and English): 138 acres/55.85 Ha

Length: about 4000 ft/ 1219 m at its longest (N/S)

Width: about 2000 ft/ 610 m (E/W)

USGS 7.5 Minute Quadrangle Map: Along western edge of Kingston East Quadrangle.

Results of Archaeological Survey

Number & name of prehistoric sites identified: None Number & name of historic sites identified: None

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: None Number of buildings/structures/cemeteries adjacent to project area: None Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts adjacent to project area: See Table 1 Number of identified eligible buildings/structures/cemeteries/districts: None

Report Author (s): Joseph E. Diamond, Ph.D.

Date of Report: 5 /30/09

#### PHASE 1A ARCHAEOLOGICAL SURVEY

#### Introduction

This cultural resource survey was conducted to evaluate proposed changes to the industrial complex known as Tech City in the Town of Ulster, Ulster County, NY. (Map 1 and 2). Tech City is the former IBM complex that has recently been converted into multiple uses for various businesses. As a result, many of the impacts to the landform that the site was constructed on occurred in the 1960's. The project location is bounded on the east edge by the tracks of the New York Central Railroad, on the south by Boices Lane, on the west by Enterprise Drive, and on the north by Old Neighborhood Road (See Map 2, 3, and 4).

The project area is a trapezoidal parcel that is 4000 feet in length (N/S) and 2000 feet in width (E/W). Map 3 shows existing conditions, Map 4 shows proposed additions. The parcel is about 138 acres (55.85 Ha), and construction impacts are proposed for three main areas. These are 1) the northwest corner (Photographs 1 and 2, Map 4: A), where four large buildings will be constructed in what is now a large parking area, 2) the central portion (Map 4: D), where a building will be removed to form a parking lot, and 3) the southeast corner, where existing parking lots and lawns will be the home to five proposed buildings (Photographs 3, 4 and 5: Map 4: C and E). Construction impacts include building footprints, utilities, regrading, and additional parking.

The author was contacted by Mr. Dan Shuster of Shuster Associates, Stone Ridge, NY. A literature survey was conducted at OPRHP on 5/112/09 by Croshier Archaeological Research.

#### Environmental/Physical Setting

The project area is a trapezoidally shaped parcel bounded primarily by commercial and light industrial businesses in the Town of Ulster. The surrounding area is composed of a combination of small sections of woodland, housing, and commercial buildings.

A walkover of the project area found no locations where natural occurring rock faces or bedrock outcrops break the surface that would be large enough to permit use as prehistoric rockshelters or windbreaks. Most of the project area is a flat glacial outwash terrace. Previous use of the project area has probably included clear cutting several times, as well as use for hay, corn or pastureland. Based on the walkover and the kind of soils that are found there, it is suggested that the majority of this project area was plowed and used for agricultural purposes in the 17<sup>th</sup>-early 20<sup>th</sup> centuries.

The flora in the project area is composed of mostly planted trees consisting of maple, sycamore, oak, locust and honey locust, willow, red maple, white pine, hemlock, apple, flowering crabapple (?) and pear. Ground cover consists of large expanses of mowed grass, various flowering plants and shrubbery such as arborvitae and other decorative plantings.

The soils in the project area (Map 5) consist primarily of Riverhead Fine Sandy Loam, 0-3% slope (RvA), with lesser amounts of Pompton Fine Sandy Loam (Pt), Riverhead Fine Sandy Loam, 3-8% slopes (RvB), and Lamson Fine Sandy Loam (Lm) near the northwest corner of the project area (Tornes, Ulster County Soil Survey 1979: Sheet 54). "The Riverhead series consists of coarse-loamy, mixed, mesic Typic Dystrochrepts. These soils are deep, well drained, and nearly level to very steep. They are on deltas. These soils formed mainly in water-laid deltaic deposits that were dropped as the streams entered glacial lakes. They have a moderately coarse textured subsoil. Slope ranges from 0-60 percent, but is dominantly 0-8 percent (Tornes 1979:132)".

The bedrock geology consists of the Lower to Middle Devonian Onondaga Limestone and Ulster Group (Fisher *et al.* 1970: Lower Hudson Sheet). A thorough walkover of the project area revealed no exposed portions of limestone. Limestone exposures occur about 400-500 feet to the east of the project area and extend from Glenerie almost to Port Ewen.

#### **Background Research**

#### PREHISTORIC ARCHAEOLOGICAL SITES

A search of the site files at the Office of Parks, Recreation and Historic Preservation (including the New York State Museum's prehistoric site files) on 5/12/09 by Croshier Archaeological Associates located 19 prehistoric sites within a 1 mile linear radius of the project area. NYSM 755, and OPRHP #'s 000041, and 0007 are probably the same site. Additionally, two nearby sites that are located along the Bear Cat Kill, but did not occur in the site files are included here. These are a sporadic find along

Morton Boulevard (Diamond 2008), and a site form that this author sent in c.1976/77 that was never recorded. The former was an isolated find along the Bear Cat Kill, a small stream to the south of the project area. The latter was a garden area, also located along the bear Cat Kill, that had produced numerous projectile points and petalas blades.

The 1 mile radius was undertaken to examine which sites shared the same landforms as the project area. and also to determine how close previous sites had been found. Of the 21 total pre-Contact (or prehistoric) sites, six are probably small flake scatters with no temporally or culturally diagnostic artifacts probably

representing small activity areas (see Table 1).

Within a one mile radius are several large sites. One is a quarry, one is a quarry/ workshop, and several have been subjected to Phase 2 Evaluations and Phase 3 Mitigations. Of particular note are forms sent in for the Boice Farm, which shares the same landform. None of the sites listed in the site files are within the project area. Slightly to the south of the one mile radius, but sharing the same soils is the Kingston Armory Site, a large multi-component site which was subjected to Phase 3 Mitigation in 2007 (LBA 2008). The Kingston Armory Site was a primarily Archaic site with occupations ranging from the Vergennes Phase at c. 4000-3000 BC (Funk 1988, 1993:157) to the Orient Phase at c. 1100-750 BC (Funk 1993:157).

#### HISTORIC ARCHAEOLOGICAL SITES

The OPRHP files list one historic archaeological site within a 1 mile radius of the project area. This is

the Freer's Hotel Midden located by Hartgen Archaeological Associates in 2002.

Three historic maps of the vicinity were consulted to determine if there were any earlier indications of historic structures in the project area. The 1853 Brink and Tillson Map of Ulster County (Map 6), shows no structures within the project area. The 1875 Beers Map of Ulster County (Map 7) shows the basic outline of present day Boices Lane with the house of "H.S. Burhans" just to the west of the project area. This was probably destroyed by the construction of IBM in the 1960's. The 1891 Beers Map (Map 8), likewise shows the "Mrs. H Burhans" structure to the west of the project area. It should be noted here that depending on the actual placement of the property boundary, that the domocile of "J. Thompson", shown on both the 1875 and 1891 Beers maps could be in the wooded parcel along the edge of the northwest corner of the project area.

Aside from the Thompson structure, the closest historic structures were several along the northern side of Old Neighborhood Road. These were investigated on 5/24/09 and found to have been destroyed, mostly for recent industrial buildings. A graveyard just to the north of Old Neighborhood Road is evident on the 1875 Beers (Map 7) as a "G Yd". This is shown again on the 1891 Beers (Map 8) as a larger dark rectangle. A cursory examination of the graveyard (Photograph 6) shows its early stones at c.1820, and its latest stones in the 1980's. Most of the headstones are from local families in the area, many of them having Dutch surnames. Examples are VanGaasbeck, VanAken, Terwilliger, Low, Wynkoop, Burhans, Osterhoudt, Brink, Snyder, Myer, TenBroeck, DeHoff and Legg.

Because the historic structures north of Old Neighborhood Road have been destroyed, no OPRHP Historic Structure forms have been completed for this project. The areas to the east, west, and south are all either recent commercial buildings or 1960's houses fronting on Boices Lane.

#### Sensitivity Assessment

#### PREHISTORIC

A literature search at OPRHP located 19 recorded prehistoric sites within a 1 mile radius of the project area. To these could be added an additional two that the author has found that are not in the site files. This brings the total to 21 pre-contact sites. Most of these are on the well drained soils characterized by the Riverhead series, and a number are small lithic scatters, quarries and workshops to the east of the project area. Based on the frequency of known nearby prehistoric sites occupying similar soils, particularly those south the project area such as the Kingston Armory Site, the project area should be considered as having a high sensitivity to the presence of prehistoric archaeological resources.

#### HISTORIC

Based on an examination of historic maps of the project area, combined with a walkover, the possibility of having encountered buried historic archaeological resources in the majority of the project area is considered very low. There is the possibility of the "J. Thompson" house being in the northwest corner near Old Neighborhood Road.

#### Recommendations

Due to the project area's location in an area that has 21 prehistoric archaeological sites, it is probable that the construction activities associated with expansion of the Tech City Campus could disturb potential prehistoric sites. Testing should follow those developed by NYAC and outlined in the OPRHP 1994 Standards, as well as the recently produced OPRHP 2005 Guidelines.

It should be noted that portions of the Tech City Campus have severe and deep disturbances, most notably the northeast corner, where excavations have dropped parking areas approximately 6 feet below grade, and other locations where entry ramps into buildings have also called for deep excavations. In other locations, landscaping has dropped grade approximately 4 feet. These areas need not be tested. Two forms of testing are suggested depending on existing conditions within the Tech City Campus. Photograph locations are keyed to Map 9 and locations where testing is suggested is shown on Map 10. These kinds of areas can be divided into two categories:

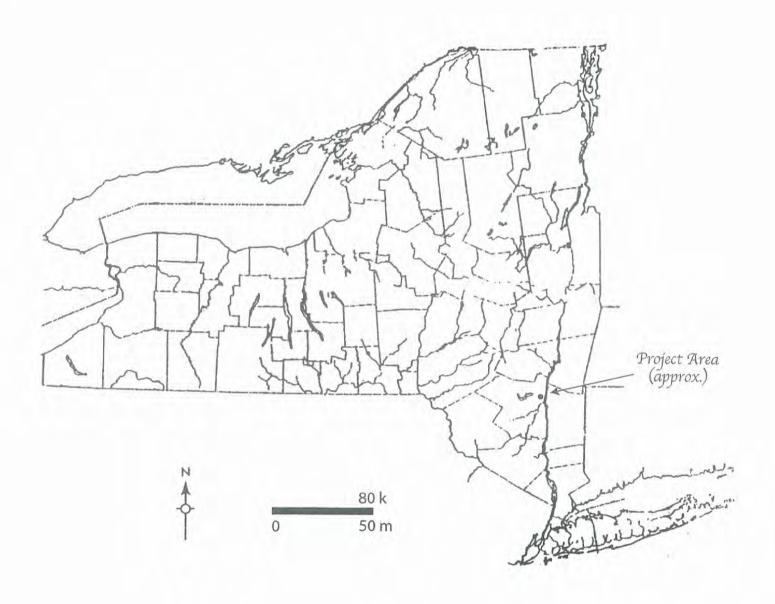
Undisturbed Areas. These are open areas of mowed lawn that have not been impacted by parking lot activity or construction (Map 10). These are locations that are probably remnant portions of the plowed fields that preceded the IBM complex. It is recommended that hand-excavated, hand-screened shovel tests be placed at 50 foot (15.2m) intervals (or less) within the Area of Proposed Effect (APE), a procedure called for by OPRHP. All excavated soils should be screened through 1/4 inch hardware mesh and examined for prehistoric and historic artifacts.

Disturbed Areas. Disturbed areas, most notably parking lots, should be cleared with an excavator down to the interface between the parking lot fill and the subsoil (Map 10). This will allow for the inspection and testing of the subsoil for such archaeological features as hearths, earth ovens, storage pits, and post molds. At the Kingston Armory Site, approximately 8300 ft/ 2530 m away and on the same landform, Late Archaic occupations were below the plowzone and extended in a stratified fashion to a depth of 60+cm. It is possible that similar buried horizons still exist under the parking lots at Tech City.

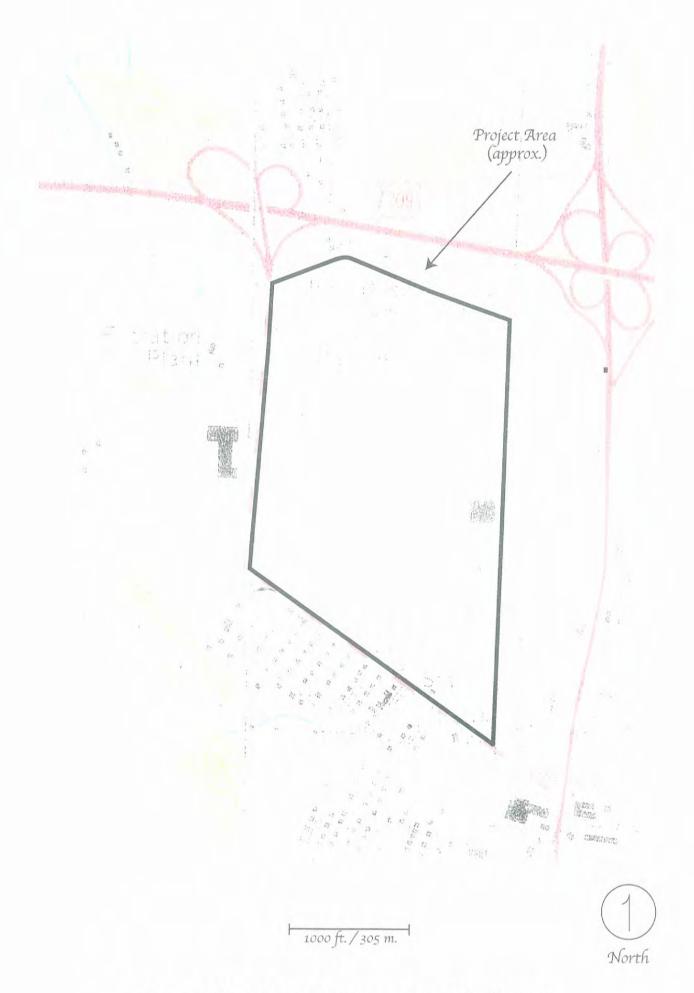
#### REFERENCES

	Beers, F.W 1875	County Atlas of Ulster, New York. From Recent and Actual Surveys and
		Records. Published by Walker and Jewett, 36 Vesey Street, New York.
	1891	Atlas of the Hudson River Valley from New York City to Troy. Watson and Co., Pearl and Vesey Streets, New York.
	Brink, P. H 1853	enry, and Oliver J. Tillson  Map of Ulster County, NY. Brink and Tillson Publishers, Rosendale NY
	Diamend I	11
	Diamond, J 2008	Phase 1 Cultural Resource Investigation, Proposed Parking for the Mid- Hudson Valley Federal Credit Union, Morton Boulevard, Town of Ulste Ulster County, NY.
	Fisher, Dona 1970	ald W., Yngvar W. Isachson, and Lawrence Rickard  Geologic Map of New York, Hudson-Mohawk Sheet. The New York Stat  Museum and Science Service Map and Chart Series No. 15, Albany.
	Funk, Rober	rt E
	1976	Recent Contributions to Hudson Valley Prehistory. New York State Museum Memoir No. 22. Albany
	1988	The Laurentian Concept: A Review. Archaeology of Eastern North America 16:1-42.
	1993	Archaeological Investigations In The Upper Susquehanna Valley, New York State. Persimmon Press, Buffalo.
	Hartgen Arc	haeological Associates
	1981	Stage 1B Archaeological Field Investigations of the City of Kingston and Town of Ulster proposed Sewer System, C-36-1037, Ulster County, NY.
	1993a	Report for Archaeological Potential and Field Reconnaissance, SEQR Parts 1 & 3, Proposed Road, Route 9W to Route 32, Town of Ulster, Ulster CO., NY
	1993Ъ	Report for Archaeological Potential and Field Reconnaissance, SEQR Parts 1b & 3, Ulster Retail development, Town of Ulster, Ulster County, NY
	2002	Phase 1A Literature Review and Sensitivity Assessment and Phase 1B Archeological Field Reconnaissance, Frank Sottile Boulevard Expansion Project, Town of Ulster, Ulster County, NY.
	2004	Phase 1 Archaeological Investigation, Ulster manor Residential Development, Town of Ulster, Ulster County, NY
Y	ouis Parner	and Associates
1	2008	Subsistence and Subsidence: Archaeological Investigations at the Kingston Armory Site (A11140.001250), Kingston, Ulster County, NY. Prepared for the Division of Military and Naval Affairs.
A	Jorgani De	and of
1)	Marcucci, Des 2003	Phase 1 Archaeological Investigation of the Chambers Senior Housing

MAPS



Map 1. New York State



Map 2. USGS Kingston West and East Quadrangles

## TECH CITY- TOWN OF ULSTER, NY

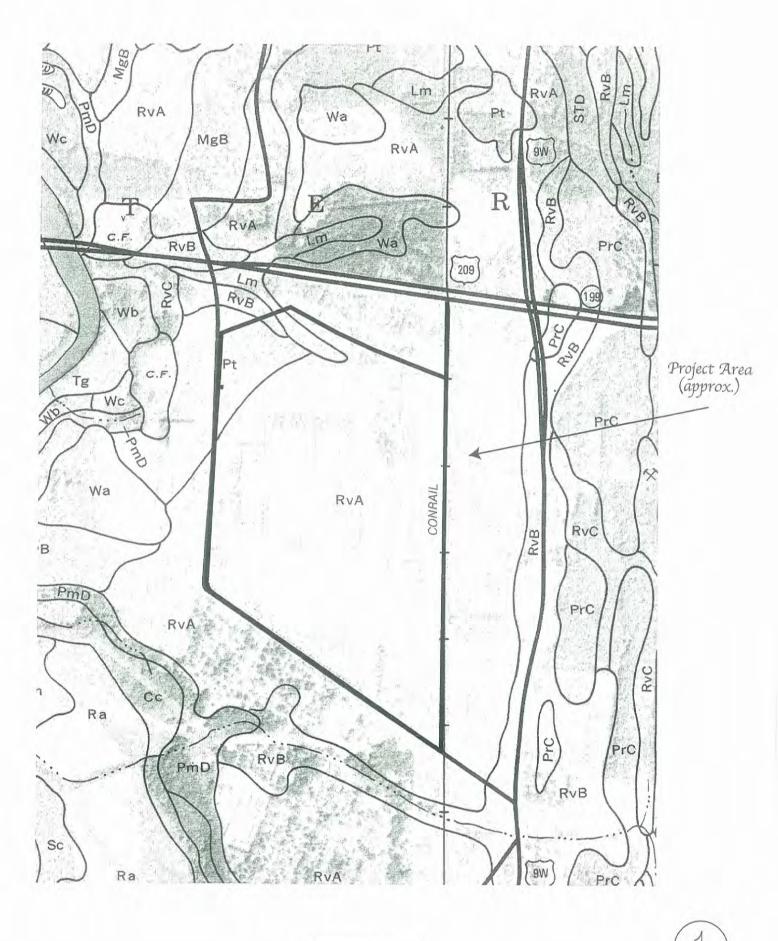


## COMPREHENSIVE DEVELOPMENT PLAN

JANUARY 27, 2009

1000 ft. / 305 m.





1000 ft. / 305 m.

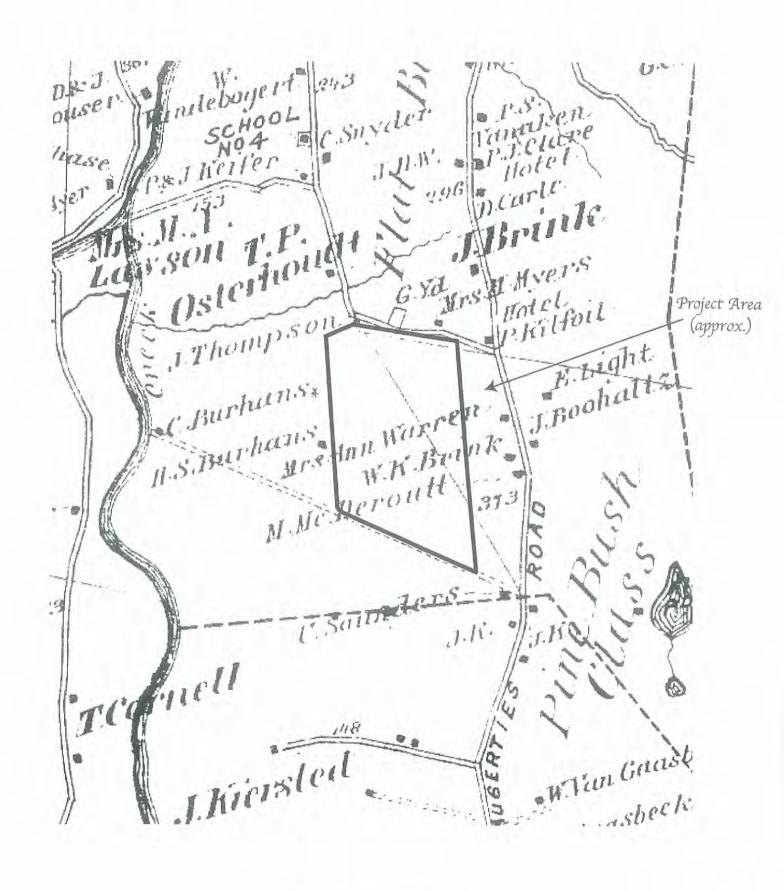


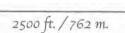
Map 5. Ulster County Soils (sheet 54)



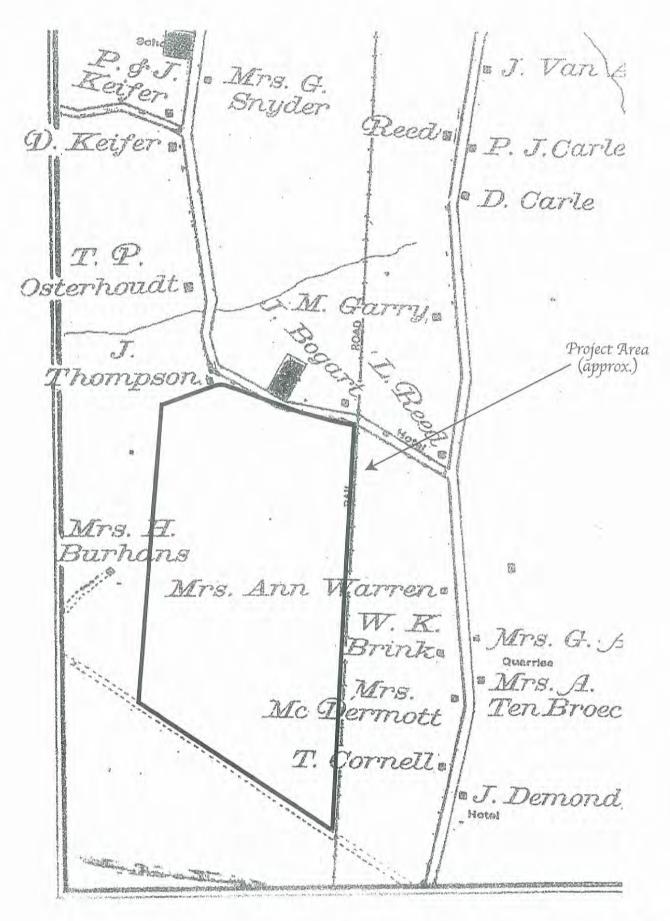
2500 ft. / 762 m.











2500 ft. / 762 m.

Map 8. 1991 Beers Map (sheet 23)

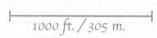


## TECH CITY- TOWN OF ULSTER, NY



## EXISTING SITE CONDITIONS

JANUARY 27, 2009





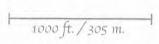
Map 9. Project Map showing photograph locations

## TECH CITY- TOWN OF ULSTER, NY



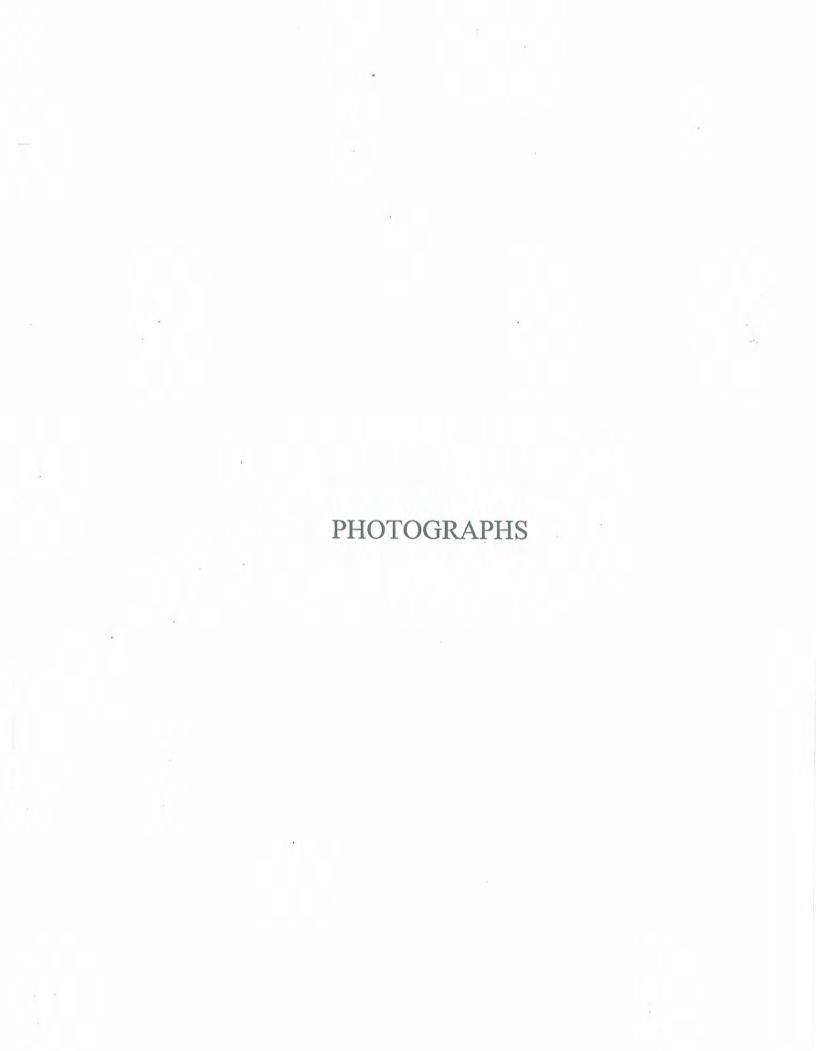
## EXISTING SITE CONDITIONS

JANUARY 27, 2009





Map 10. Project Map showing recommended testing procedure by area





Photograph 1: Parking lot in NW corner of project area. View NW.



Photograph 2. Parking lot in NW corner of project area. View N.



Photograph 3: Parking lot in SE corner of project area. View E.



Photograph 4. Large lawn in SE corner of project area. View N.



Photograph 5: Large lawn in SE corner of project area. View NW.



Photograph 6. Graveyard on Old Neighborhood Road. View N.

**TABLES** 

NYSOPKHP Site #	WYSM #	NYSM # Site Name	Dist. from APE ft/m Time Period	Time Period	Site Type	Ref./Arch
	755	Boices Dairy	750 ft/ 229 m	Multi-Component Pre.	Camps	Funk, R.E/1933 SF
	5041	5041 Village	3000 ft/914 m	Multi-Component Pre.	Camps/Vill.	-
	2668	7668 Kingston Site	5500 ft/ 1676 m	Multi-Component Pre.	Camps	
	8876	8876 No Name	5000 ft/1524 m	No information	Camps?	Van Sickle 1995
	8877	No Name	5000 ft/1524 m	No information	Camps?	Van Sickle 1995
	9206	9076 No Name	5000 ft/1524 m	No diagnostics	Camps?	Diamond 1996
A111.18.000021		Ulster Road Area#1	2000 ft/610 m	Pre-Contact	SLS	HAA 1993a
A111.18.000022		Ulster Road Area #2 *	4500 ft/ 1372 m	Pre-Contact	SLS	HAA 1993a
A111.18.000023		Ulster Road Area#3 *	3000 ft/914 m	Pre-Contact	SLS	HAA 1993a
A111.18.000024		Ulster Road Area#4 *	3000 ft/914 m	Pre-Contact	SLS	HAA 1993a
A111.18.000025		Zaremba Quarry Site Loc.1	2000 ft/610 m	Pre-Contact	Quarry/WS	HAA 1993b**
A111.18.000026		Zaremba Workshop Site Loc.2	2300 ft/710 m	Pre-Contact	Workshop	HAA 1993b**
A111.18.000041		Site A-Old Boices Property	2500 ft/762 m	Pre-Contact	Camps?	Diamond 2000
A111.18.000046		Precontact Locus 4	2500 ft/762 m	Pre-Contact	SLS	HAA 2002
A111.18.000047		Freers Hotel Midden	2500 ft/762 m	Historic	Hotel	HAA 2002
A111.18.000048		Chambers 54-1	4500 ft/ 1372 m	Orient Phase	Camp	Marcucci 2003
A111.18.000052		Manor Quarry Site *	4500 ft/ 1372 m	Pre-Contact	Quarry	HAA 2002
A111.18.000051		Manor Site *	4500 ft/ 1372 m	Late Archaic	Camps	HAA 2002
A111.18.000038		Ulster Prehistoric Site 1	5000 ft/1524 m	Pre-Contact	Camps?	Diamond 1996
A111.18.000039		Ulster Prehistoric Site 1	5200 ft/1585 m	Late Archaic	Camp	Diamond 1996
A111.18.00007	5041	See NYSM 5041 above				
MHVFCU ***		MHVFCU Site	800 ft/ 244 m	No information	SLS	Diamond 2008
Local site****		No Name***	800 ft/244 m	Multi-component	Camps/Vill.	Diamond 1976
		*National Register Eligible				
		** see also Werner 1994				
		*** Not in Site Files:See text				
		**** Sent in by JD in 1976				
		SF-Site Files				
		SLS-Small Lithic Scatter				

# APPENDIX G TRAFFIC STUDY BY CREIGHTON MANNING ENGINEERING



# **Ulster Tech City GEIS**

## **Town of Ulster, New York**

CME Project No. 09-024d

Prepared For:

Town of Ulster



Prepared By:

CREIGHTON MANNING ENGINEERING, LLP
17 Computer Drive West
Albany, New York 12205
(518) 446-0396

October 6, 2009

#### **Table of Contents**

		<u>Page</u>
Table List of List of	Page of Contents frigures facilities facilities for the state of the s	iii iii
I.	INTRODUCTION	1
II.	EXISTING CONDITIONS	4 8 9
III.	TRAFFIC FORECASTS  A. No-Build Traffic Volumes  B. Trip Generation  C. Trip Distribution  D. Trip Assignment  E. Build Traffic Volumes	11 12 14
IV.	ANALYSISA. Capacity/Level of Service AnalysisB. Threshold AnalysisC. Roundabout AnalysisD. Screen-Line Assessment	
V.	CONCLUSIONS AND RECOMMENDATIONS	41

## **List of Figures**

	<u>Page</u>
Figure 1.1 – Project Location	3
Figure 2.1 – 2009 Existing Traffic Volumes – PM Peak Hour	10
Figure 3.1 – 2014 No-Build Traffic Volumes – PM Peak Hour	15
Figure 3.2 – 2029 No-Build Traffic Volumes – PM Peak Hour	16
Figure 3.3 – Trip Distribution – Primary	17
Figure 3.4 – Trip Distribution – Pass-By	18
Figure 3.5 – Trip Assignment – Primary	19
Figure 3.6 – Trip Assignment – Pass-By	20
Figure 3.7 – 2014 Build Traffic Volumes – PM Peak Hour	21
Figure 3.8 – 2029 Build Traffic Volumes – PM Peak Hour	22
Figure 4.1 – Overall Improvement Summary	37
Figure 4.2 – Concept Plan	38
Figure 4.3 – Boices Lane Concept Plan	39
Figure 4.4 – Potential Roundabout Locations and Impacts	40
List of Tables	
Table 1.1 – Development Plan	1
Table 3.1 – Summary of Peak Hour Traffic Projections	11
Table 3.2 – Trip Generation Summary	13
Table 4.1 – Level of Service Summary	24
Table 4.2 – Threshold Level of Service Summary	31
Table 4.3 – Roundabout Level of Service Summary	33
Table 4.4 – Traffic Volume Screen-Line Comparison	36

## **List of Appendices**

Appendix A	Conceptual Master Plan
Appendix B	Turning Movement Counts
Appendix C	Automatic Traffic Recorder Data
Appendix D	Other Development Traffic Volumes
Appendix E	Multi-Use Trip Credit
Appendix F	Level of Service Analysis
Appendix G	Peak hour Traffic Signal Warrants
Appendix H	Threshold Level of Service Analysis
Appendix I	Roundabout Level of Service Analysis

# CHAPTER I

This report summarizes the results of a Traffic Impact Study for the proposed reoccupation of the *Tech City Office Park* located in the Town of Ulster, Ulster County, New York. The project site, known as the East Campus of Tech City, is located in the south of US Route 209/NY Route 199 and east of Enterprise Drive. The project location is shown on Figure 1.1

#### A. Planned Project

The existing East Campus is an approximate 2,164,000 square-foot (SF) development consisting primarily of office and industrial space. The proposed development plan includes the demolition of approximately 290,000 SF of obsolete buildings, the reuse of 558,000 SF of two existing buildings for interior parking, the continued use of 1,318,000 SF of existing buildings, and the construction of approximately 645,000 SF of new buildings. Therefore, the building gross floor area of the new campus will be reduced to approximately 1,963,000 SF spread out over 5 parcels. Table 1.1 summarizes the development plan for the proposed project.

**Table 1.1 – Development Plan** 

Land Use	Size					
	Parcel A	Parcel B	Parcel C	Parcel D	Parcel E	Total
Office		169,646 SF	302,446 SF			472,092 SF
Industrial/Flex				151,246 SF		151,246 SF
Warehousing	160,000 SF			422,914 SF		582,914 SF
Research & Development	160,000 SF			280,024 SF		440,024 SF
Residential			72-units (86,400 SF)		56-units (67,200 SF)	128-units (153,600 SF)
Recreational Community Center			,		29,728 SF	29,728 SF
Multi-plex Move Theater					10-screens (42,000 SF)	42,000 SF
Restaurant					12,000 SF	12,000 SF
Retail			43,200 SF		36,000 SF	79,200 SF
Total	320,000 SF	169,646 SF	432,046	854,184 SF	186,928	1,962,804 SF

A conceptual master plan dated January 27, 2009 included under Appendix A reflects the original proposed access plan into the site. This plan provided access via

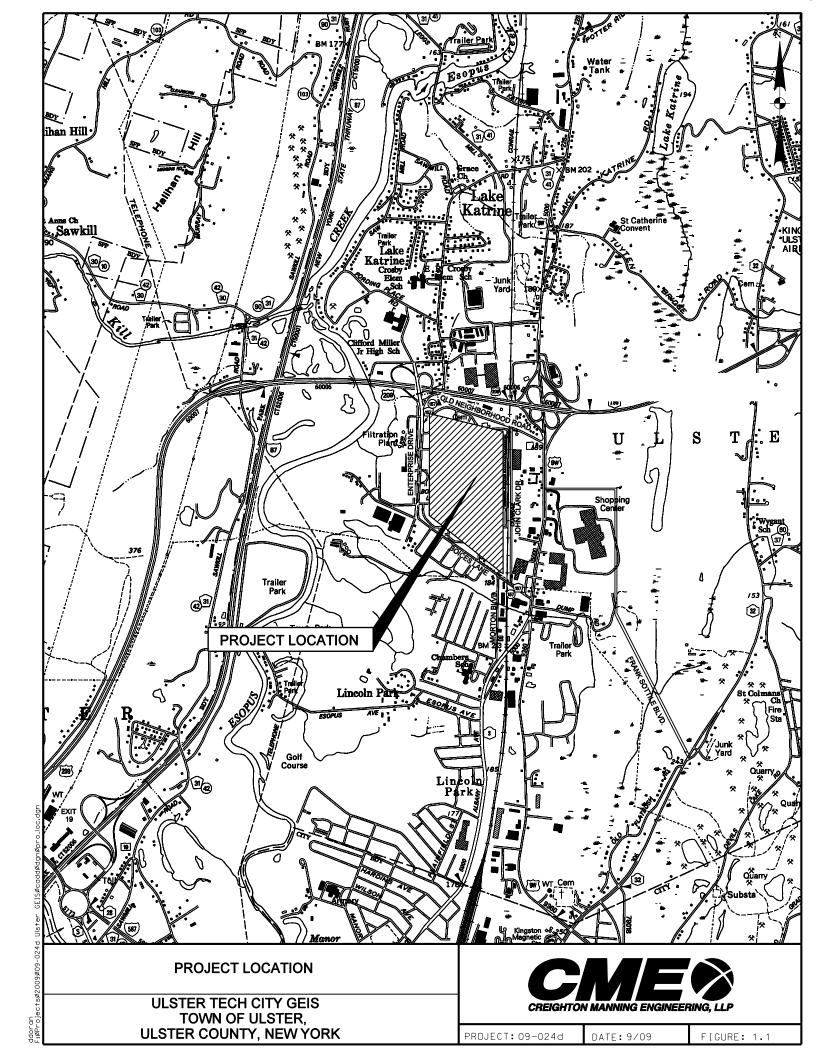
three driveways on Old Neighborhood Road, three driveways on Enterprise Drive, and three driveways on Boices Lane. It is noted that the ceremonial drop-off loop for one-way entering and exiting traffic located in front of Parcel B on Enterprise Drive will remain open. It was agreed during the planning process that the northern most site driveway on Enterprise Drive should be limited to right-in/right-out only access. It was also determined that the westerly most site driveway on Boices Lane should be eliminated from the development plan and that the middle site driveway on Boices Lane should be re-aligned opposite an existing roadway. Some of the internal roadways are proposed to be converted to public roads. The revised conceptual master plan illustrates the proposed land uses, site access points, and future public streets bounded by the red right-of-way line.

#### B. Study Area and Methodology

The study area includes the following intersections, as per the scoping document adopted on April 16, 2009 by the Town as Lead Agency for SEQRA:

- Enterprise Drive/US Route 209 (NY Route 199) Westbound Ramps
- Enterprise Drive/US Route 209 (NY Route 199) Eastbound Ramps
- Enterprise Drive/Existing Site Driveways (3)
- Enterprise Drive/Loop Driveways (2)
- Enterprise Drive/Boices Lane
- Boices Lane/Site Driveways (2)
- Boices Lane/Morton Boulevard/East Driveway
- Boices Lane/John Clark Drive/Retail Driveway

It was agreed during the scoping process that the critical study area intersections would include those located on Enterprise Drive and Boices Lane and that the access provided from Neighborhood Road was incidental. The potential traffic impact of the proposed project was determined by documenting the existing traffic conditions in the area, projecting future traffic volumes, including the peak hour trip generation of the site, and determining the operating conditions of the study area intersections after development of the proposed project.



## **CHAPTER II**

#### **EXISTING CONDITIONS**

## A. Roadways Serving the Site

- <u>US Route 209/NY Route 199</u> The US Route 209/NY Route 199 overlap is classified as a Rural Principal Arterial in the study area. US Route 209 provides east-west travel throughout the study area. Data published by the New York State Department of Transportation (NYSDOT) in the 2006 Highway Sufficiency Ratings indicates that the pavement on US Route 209 is in good condition near the project site. The posted speed limit on US Route 209 is 55-mph near the project site.
- Enterprise Drive Enterprise Drive, also known as Ulster County Road 157, is a county road that provides north-south travel along the western edge of the Tech City East Campus from US Route 209 to Boices Lane. Enterprise Drive divides the Tech City Campus into eastern and western halves with entirely commercial office space along the roadway. Enterprise Drive provides two 11-12 foot travel lanes in each direction, a raised center median, and shoulders varying in width from 1 foot to 10 feet. There is an 8-foot multiuse path along the eastern side of Enterprise Drive, and the posted speed limit is 40-mph.
- <u>Boices Lane</u> Boices Lane, also known as Ulster County Road 157 east of its intersection with Enterprise Drive, is a county road that provides east-west travel in the Town of Ulster from Enterprise Drive to US Route 9W. Boices Lane borders the southern edge of the East Campus and provides two-way travel with two 11-foot westbound travel lanes and one 13-foot eastbound travel lane. Boices lane generally has 1-foot shoulders and a speed limit of 40-mph. Land use along Boices lane is primarily commercial, with a small number of residences.

# B. Study Area Intersections

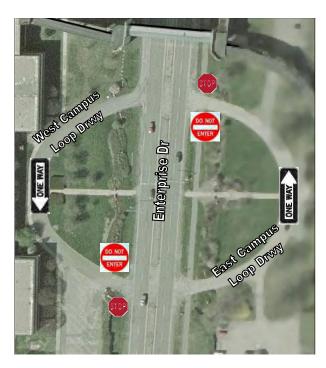
- Enterprise Drive/US Route 209(NY Route 199) Westbound Ramps This intersection operates under free-flow conditions. The eastbound Route 209 westbound off ramp approach provides a one lane approach that continues as a second southbound lane on Enterprise Drive. The northbound Enterprise Drive approach provides one lane for through movements and one lane for right turns merging onto Route 209 westbound. The southbound Enterprise Drive approach provides one shared travel lane for through and left-turn movements.
- Enterprise Drive/US Route 209(NY Route 199) Eastbound Ramps This
  intersection operates under actuated traffic signal control with a two phase
  signal cycle averaging 65 seconds. The eastbound Route 209 eastbound off

ramp approach splits into two lanes. The northerly split provides two lanes for left-turns only onto Enterprise Drive while the southerly split turns into a parallel one-way road southbound that intersects Enterprise Drive further south. The northbound Enterprise Drive approach provides two lanes for through movements and a separate right-turn slip lane. The southbound Enterprise Drive approach provides a lane for through movements and a shared left-turn/through lane.

- Enterprise Drive/North Driveway This is a T-Intersection operating under stop-sign control. Enterprise drive is a divided highway at this point with a raised median separating northbound and southbound vehicles. The westbound North Driveway approach consists of an exclusive left-turn lane and a separate right-turn lane. The northbound Enterprise Drive approach consists of a through lane and a shared right-turn/through lane. The southbound Enterprise Drive approach consists of two through lanes and an exclusive left-turn lane. It is noted that this intersection was controlled by a traffic signal. However, existing traffic volumes no longer warrant traffic signal control and the signal heads are currently covered.
- Enterprise Drive/US Route 209 Westbound Off Ramp/Middle Driveway This is a 4-way intersection operating under stop-sign control on the eastbound Route 209 off ramp approach and westbound Middle Driveway approach. The eastbound approach consists of a single lane for shared left-turn/through movements. A separate southbound through lane operates under yield control to Enterprise Drive approximately 200-feet to the south. The westbound Middle Driveway approach consists of a single lane for shared travel movements. The northbound Enterprise Drive approach consists of a through lane and a shared through/right-turn lane. The southbound Enterprise Drive approach consists of two through lanes. Left turns onto the Middle Driveway are prohibited. The aerial picture below shows the intersection geometry. It is noted that this intersection was controlled by a traffic signal. However, existing traffic volumes no longer warrant traffic signal control and the signal heads are currently covered.



Enterprise Drive/Loop Driveways – This section of Enterprise Drive consists
of two lanes in both the northbound and southbound directions. The loop
driveways provide one-way counter-clockwise circulation and allow vehicles
to turn to and from the driveways in all directions. The aerial picture below
shows the intersection geometry.



• Enterprise Drive/West Campus Driveway/South Driveway – This is a 4-way intersection operating under actuated traffic signal control with a two phase

signal cycle averaging 90 seconds. The eastbound West Campus Driveway approach consists of a shared left-turn/through lane and a separate right-turn lane. The westbound South Driveway approach consists of a single lane for shared travel movements. The northbound Enterprise Drive approach consists of a through lane and a shared through/right-turn lane. Left-turns are prohibited on the northbound approach. The southbound Enterprise Drive approach consists of a shared through/right-turn lane, a through lane and an exclusive left-turn lane.

- Enterprise Drive/Boices Lane This is a 4-way intersection operating under actuated traffic signal control with a four phase signal cycle averaging 90 seconds. The eastbound Boices Lane approach consists of an exclusive left-turn lane and a shared through/right-turn lane. The westbound Boices Lane approach consists of a shared left-turn/through lane and a continuous right-turn slip lane. The northbound Mountain View Court approach consists of a single lane for shared travel movements. The southbound Enterprise Drive approach consists of a shared through/right-turn lane and an exclusive left-turn lane.
- Boices Lane/West Driveway This is a T-intersection with the driveway operating under stop-sign control on the southbound approach. The eastbound Boices Lane approach consists of a single lane for shared travel movements. The westbound Boices Lane approach consists of a through lane and a shared through/right-turn lane. The southbound West Driveway approach consists of a single lane for shared left and right turn movements. Traffic is currently restricted from using the western driveway and it is blocked off.
- Boices Lane/Middle Driveway This is a T-intersection with the driveway operating under stop-sign control on the southbound approach. The eastbound Boices Lane approach consists of a single lane for shared travel movements. The westbound Boices Lane approach consists of a through lane and a shared through/right-turn lane. The southbound Middle Driveway approach consists of a single lane for shared left and right turn movements. Traffic is currently restricted from using the Middle driveway and it is blocked off. It is noted that this intersection was controlled by a traffic signal. However, existing traffic volumes no longer warrant traffic signal control and the signal heads are currently covered.
- Boices Lane/Morton Boulevard/East Driveway This is a 4-way intersection operating under pre-timed traffic signal control with a four phase signal cycle averaging 75 seconds. The eastbound Boices Lane approach consists of a shared left-turn/through lane and a separate right-turn lane. The westbound Boices Lane approach consists of an exclusive left-turn lane, a through lane, and a separate right-turn lane. The northbound Morton Boulevard approach consists of a shared left-turn/through lane and a separate right-turn lane. The

- southbound East Driveway approach consists of an exclusive left-turn lane and a shared through/right-turn lane. The pavement markings on the southbound approach are faded and the driveway has very limited use.
- Boices Lane/John Clark Drive/Retail Driveway This is a 4-way intersection operating under actuated traffic signal control with a two phase signal cycle averaging 75 seconds. The eastbound Boices Lane approach consists of a shared left-turn/through lane and a shared through/right-turn lane. The westbound Boices Lane approach consists of a shared left-turn/through lane and a separate right-turn lane. The northbound Retail Driveway approach and the southbound John Clark Drive approach consist of a shared left-turn/through lane and a separate right-turn lane.

# C. Existing Conditions

Intersection turning movement traffic counts were conducted at the study area intersections on Thursday, April 23, 2009, Tuesday, April 28, 2009, and Wednesday, May 6, 2009 during the afternoon peak commuter period from 4:00 to 6:00 p.m. The raw traffic volumes are included in Appendix B. These peak hour traffic counts were balanced where appropriate and provide existing traffic conditions at the study area intersections as summarized on Figure 2.1, and form the basis for all traffic forecasts.

Automatic traffic recorders (ATRs) were installed on Enterprise Drive and Boices Lane to record hourly traffic volumes from Tuesday, April 28, 2009 through Wednesday, May 6, 2009. The raw ATR data is included in Appendix C.

The following observations are evident based on the existing traffic volume data:

- The PM peak hour generally occurred from 4:30 to 5:30 p.m.
- The weekday PM peak hour is the highest traffic volume time period and is the appropriate design hour for this study. Traffic volumes during the weekday AM and weekend mid-day peak hours are less.
- The two-way traffic volume on Enterprise Drive adjacent to the project site is approximately 1,390 vehicles during the PM peak hour. The two-way traffic volume on Boices Lane adjacent to the project site is approximately 1,400 vehicles during the PM peak hour.
- Heavy vehicles on Enterprise Drive account for approximately 1 percent of two-way traffic adjacent to the project site during the PM peak hour.

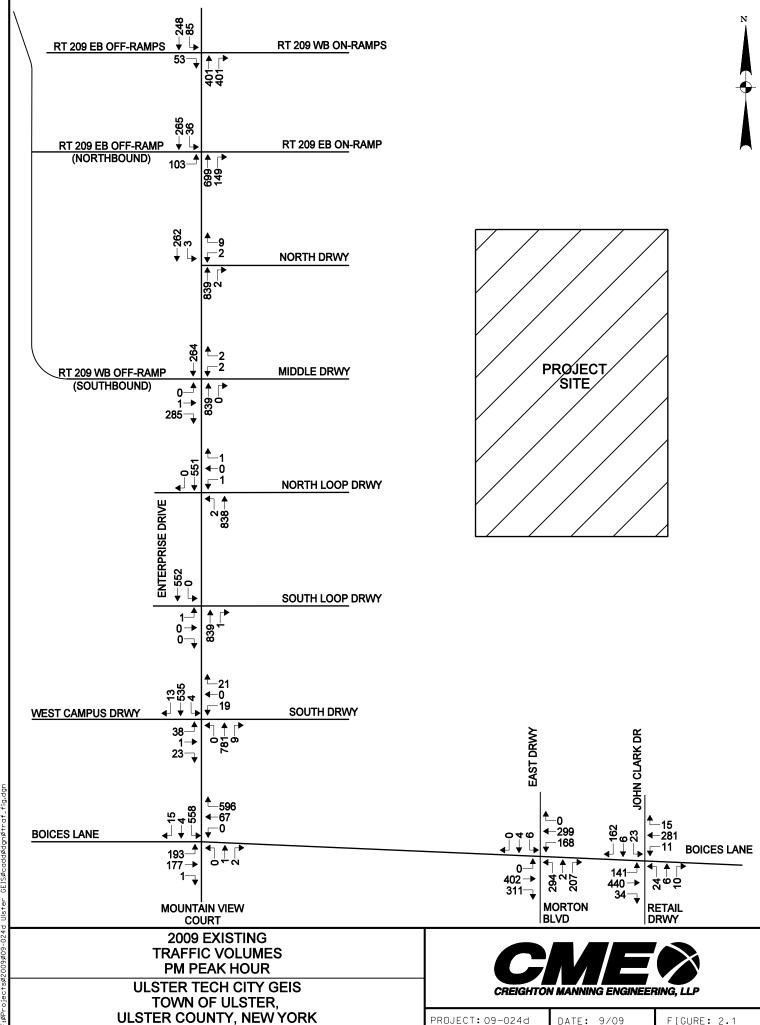
 Heavy vehicles on Boices Lane account for less than 1 percent of two-way traffic adjacent to the project site during the PM peak hour.

#### D. Transit

The primary regional transit service provider that operates in the project area is the Ulster County Area Transit (UCAT). The closest UCAT bus route provides year round service and is called the SUNY Ulster-Kingston-Mall Area line that travels from the SUNY Ulster Campus in the Town of Marbletown to the shopping area on Route 9W in the Town of Ulster located just south of NY Route 199. No service is provided on weekends or on holidays. It is noted that while there are no fixed bus stops in the project area, this line will travel to the existing Tech City Campus on request only.

## E. Pedestrian/Bicycle Accommodations and Environment

A review of the existing road network indicates that a multi-use path is provided on the south and west side of the existing campus located on the north side of Boices Lane starting at the Morton Boulevard intersection and on the east side of Enterprise Drive ending at the Route 209 ramps. Actual pedestrian and bicycle counts conducted at the study area intersections indicate that pedestrian and bicycle traffic is fairly sparse during the PM peak hour and that existing joggers, walkers, and bicyclists use either the available shoulders or multi-use path.



PROJECT: 09-024d

DATE: 9/09

FIGURE: 2.1

# CHAPTER III TRAFFIC FORECASTS

To evaluate the impact of the proposed development, traffic projections were prepared for a 2014 and 2029 Build year (5 and 20 year build-out) and a comparison was made between the future traffic volumes with and without the project. Table 3.1 describes the various traffic forecasts contained at the end of this chapter.

Table 3.1 – Summary of Peak Hour Traffic Projections

Figure Description	Figure Number
2014 No-Build Traffic Volumes – PM Peak Hour	Figure 3.1
2029 No-Build Traffic Volumes – PM Peak Hour	Figure 3.2
Trip Distribution – Primary	Figure 3.3
Trip Distribution – Pass-By	Figure 3.4
Trip Assignment – Primary	Figure 3.5
Trip Assignment – Pass-By	Figure 3.6
2014 Build Traffic Volumes – PM Peak Hour	Figure 3.7
2029 Build Traffic Volumes – PM Peak Hour	Figure 3.8

#### A. No-Build Traffic Volumes

The 2014 and 2029 No-Build traffic volumes are based on an analysis of existing traffic growth trends, other developments in the project area, and discussions with the Ulster County Transportation Council (UCTC). Historical traffic volume data found in the 2007 Traffic Data Reports, published by the New York State Department of Transportation (NYSDOT), indicates that traffic volumes in the vicinity of the site have been increasing by approximately one percent per year over the last several years. Therefore, a growth rate of one percent per year was applied for to the 2009 existing traffic volumes to calculate the 2014 and 2029 background growth.

The Town of Ulster provided information regarding additional development projects within the study area. Background traffic from the following projects was included in the calculation of the No-Build volumes:

- Olive Garden 7,500 SF
- White Castle 2,500 SF
- Ulster Manor 128 Townhouses

- O2 Day Spa 4,186 SF
- Shop Rite Plaza Redevelopment 69,371 SF

Trips associated with these projects were distributed to the study area intersections as shown on Figure D.1 in Appendix D. The trips associated with these other developments were added to the background traffic volumes to develop the 2014 and 2029 No-Build traffic volumes. The 2014 and 2029 No-Build traffic volumes which include a general growth rate and volumes from the other development projects are illustrated on Figure 3.1 and Figure 3.2. The No-Build volumes represent the traffic conditions expected at the study area intersection before re-development of the proposed *Tech City Office Park*.

#### B. Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from the site. The Institute of Transportation Engineers (ITE) *Trip Generation, 7<sup>th</sup> edition*, provides trip generation data for various land uses based on studies of similar existing developments located across the country. The trips for the proposed development were estimated using ITE land use code (LUC) 710 for General Office, LUC 760 for Research & Development, LUC 110 for General Light Industrial, LUC 150 for Warehousing, LUC 220 for Apartments, LUC 495 for Recreational Community Center, LUC 445 for Multiplex Movie Theater, LUC 932 for High-Turnover (Sit-Down) Restaurant, and LUC 814 for Specialty Retail.

It can be expected that some trips to the proposed project will originate from traffic that is already passing the site on Enterprise Drive and Boices Lane. Pass-by trips are vehicles that will stop at the site before continuing on to their primary destination. For example, a westbound trip on Boices Lane leaving work may stop at the restaurant and then continue westbound towards home. This type of trip would be considered a pass-by trip. The percentage of pass-by trips applied to the different land uses is based on a review of data provided by ITE. The data shows that the average percentage of pass-by trips for high turn-over sit-down restaurants of a similar size is 43 percent. Based upon this information, a 40 percent pass-by percentage was applied to trips generated by the proposed restaurant land uses.

It can also be expected that some of the traffic coming to the campus will stop at more than one location. These trips are referred to as multi-use trips and are described as trips that use one or more land uses in the same area. For example, an employee of one of the office buildings could go to the movies after work before heading home to one of the residences located internally. These trips are referred to as multi-use trips and are described as trips that use one or more land uses in the same area. The *Multi-Use Development Trip Generation and Internal Capture Summary* table provided by ITE (located under Appendix E) shows the potential internal capture rate for the PM peak hour for all land uses. Based on this table, it was calculated to apply an overall 6 percent internal capture rate to each of the land uses to account for these types of trips. The peak hour trip generation estimate is summarized in Table 3.2.

**Table 3.2 – Trip Generation Summary** 

Parcel	Land Use	Size	Land Use	PM Peak Hour			
raicei	Luitu 030		Code	Enter	Exit	Total	
Α	Research & Development Space	160,000 SF	760	24	135	159	
	Warehousing		150	13	38	51	
В	Office Space	169,646 SF	710	37	181	218	
	Office Space	302,446 SF	710	66	324	390	
С	Retail Space	43,200 SF	814	51	65	116	
	Apartments	72-units (86,400 SF)	220	33	18	51	
	Light Industrial	151,246 SF	110	7	52	59	
D	Warehousing	422,914 SF	150	33	100	133	
	Research & Development Space	280,024 SF	760	42	237	279	
	Apartments	56-units (67,200 SF)	220	24	13	37	
	Recreational Community Center	29,728 SF	495	24	41	65	
E	Multiplex Movie Theater	10-screens (42,000 SF)	445	61	75	136	
	Restaurant	12,000 SF	932	82	52	134	
	Retail Space	36,000 SF	814	42	54	96	
	Total Trips	1,962,804 SF		539	1,385	1,924	
	Multi-Use Credit = 6%			-58	-58	-116	
	Total Trips – Multi-Use			481	1,327	1,808	
	Pass-by = 40% of Restaurant Trips			-25	-25	-50	
	Total New Trips			456	1,302	1,758	

Accounting for pass-by and multi-use trips, the *Tech City Office Park* will generate a total of 1,758 new vehicle trips during the PM peak hour with 456 trips entering and 1,302 trips exiting. The total number of trips expected at the driveways to

the site is the sum of the primary trips and pass-by trips (481 entering trips, 1,327 exiting trips, and 1,808 total trips).

## C. Trip Distribution

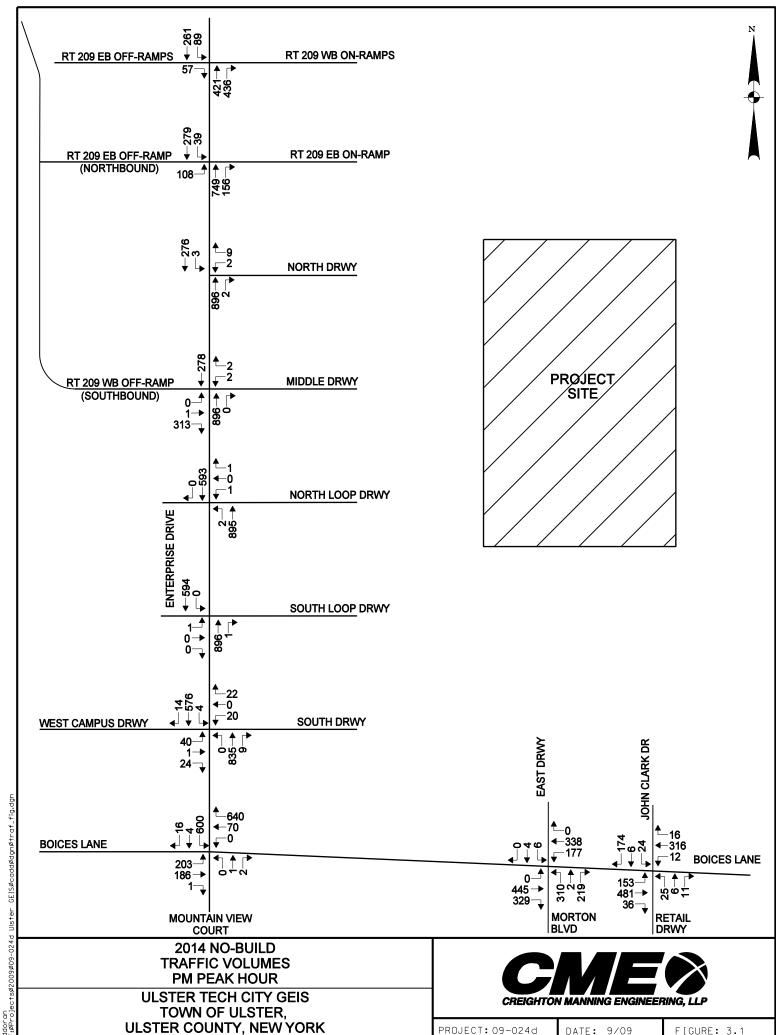
Trip distribution describes where traffic originates or where traffic is destined. Traffic generated by the proposed project was distributed based on existing travel patterns, the layout of the site and the locations of the proposed driveways, and the locations of population centers and major travel routes in the region. In general, it is expected that approximately 40 percent of the site generated traffic will travel to and from the site via Route 9 northbound and southbound. Approximately 25 percent of the site generated traffic is expected to travel to and from the west via Route 209 while approximately 10 percent of the site generated traffic will travel to and from the east on NY Route 199. The remaining 25 percent of site generated traffic will be split between Neighborhood Road to the north, Morton Boulevard to the south, and John Clark Drive to the east. The trip distribution pattern for primary tips to the development is shown on Figure 3.3 while the pass-by trip distribution is shown on Figure 3.4.

# D. Trip Assignment

Trip assignment combines the results of the trip generation and trip distribution and determines the specific paths and roadways that will be used between various origin/destination pairs. Figure 3.5 shows the resulting primary trip assignment for project development while Figure 3.6 shows the pass-by trip assignment.

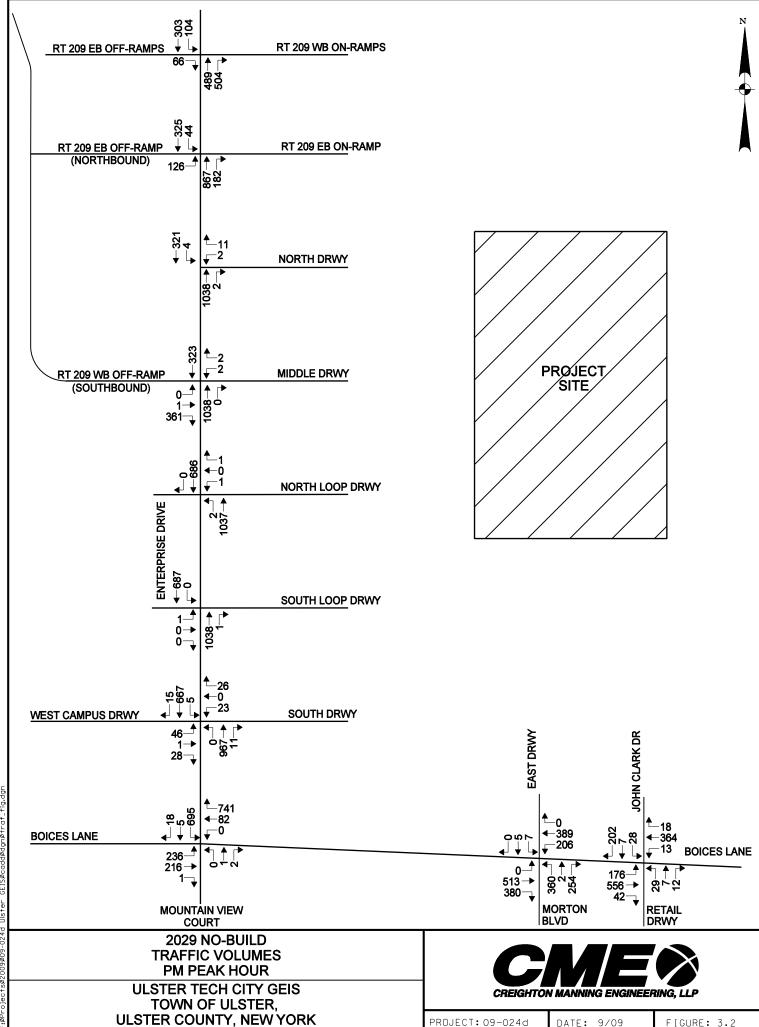
#### E. Build Traffic Volumes

The results of the site generated traffic assignment were added to the appropriate No-Build traffic volumes to develop the Build traffic volumes. The 2014 and 2029 Build traffic volumes are shown on Figure 3.7 and Figure 3.8.



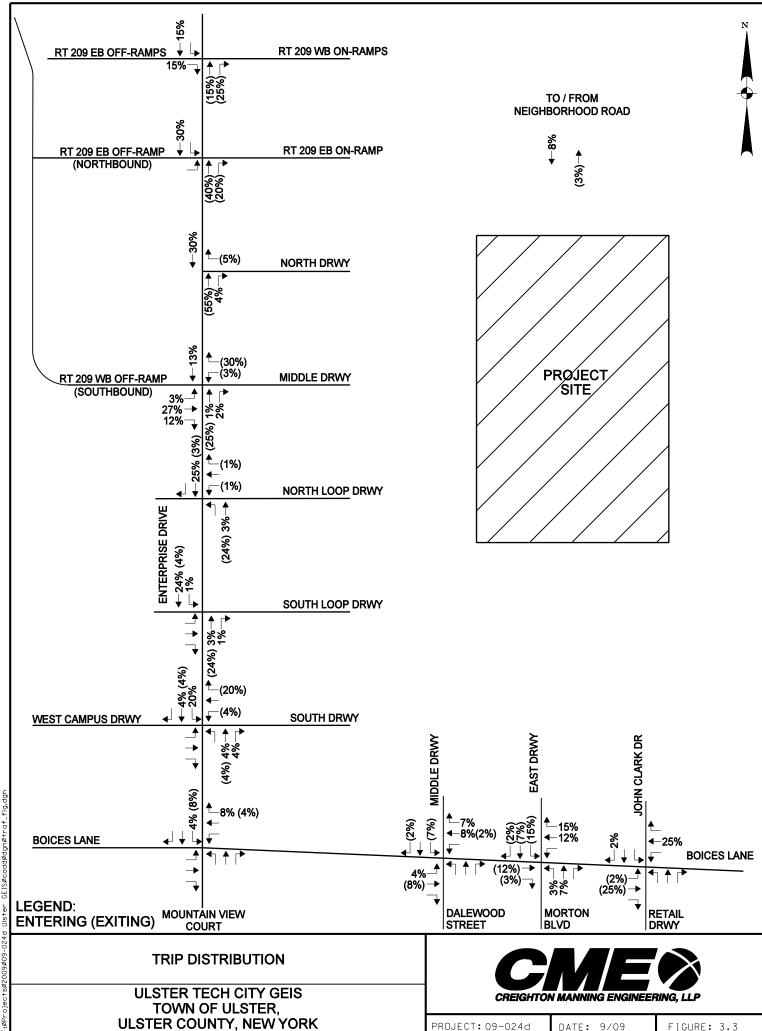
PROJECT: 09-024d

DATE: 9/09

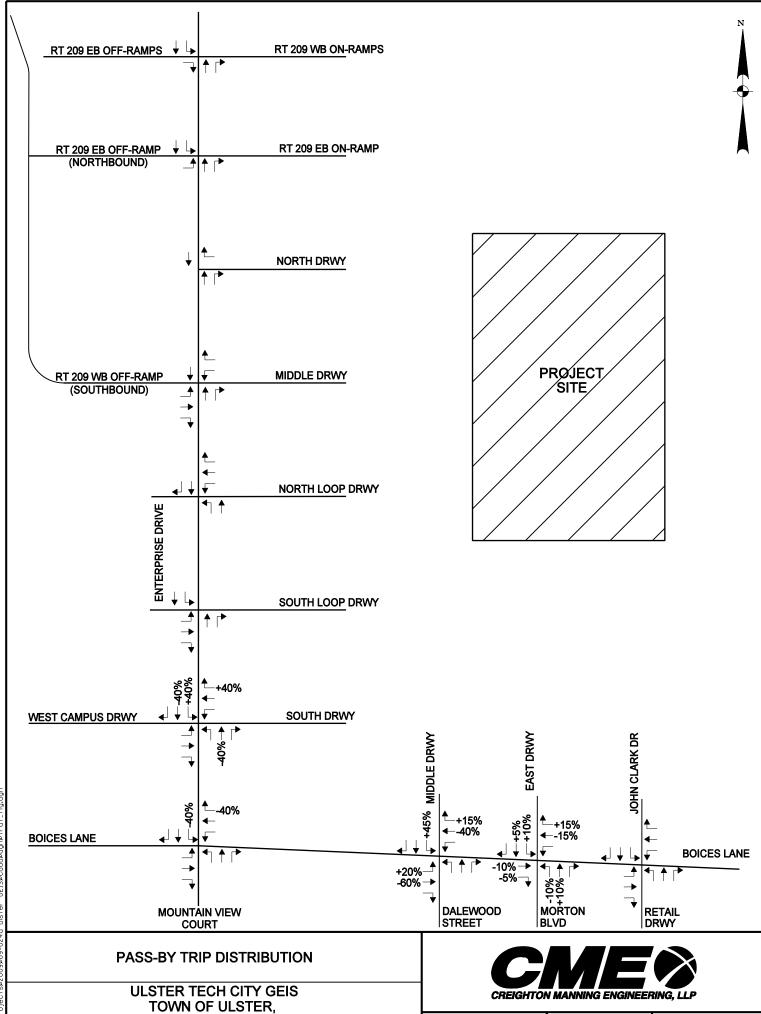


PROJECT: 09-024d

DATE: 9/09



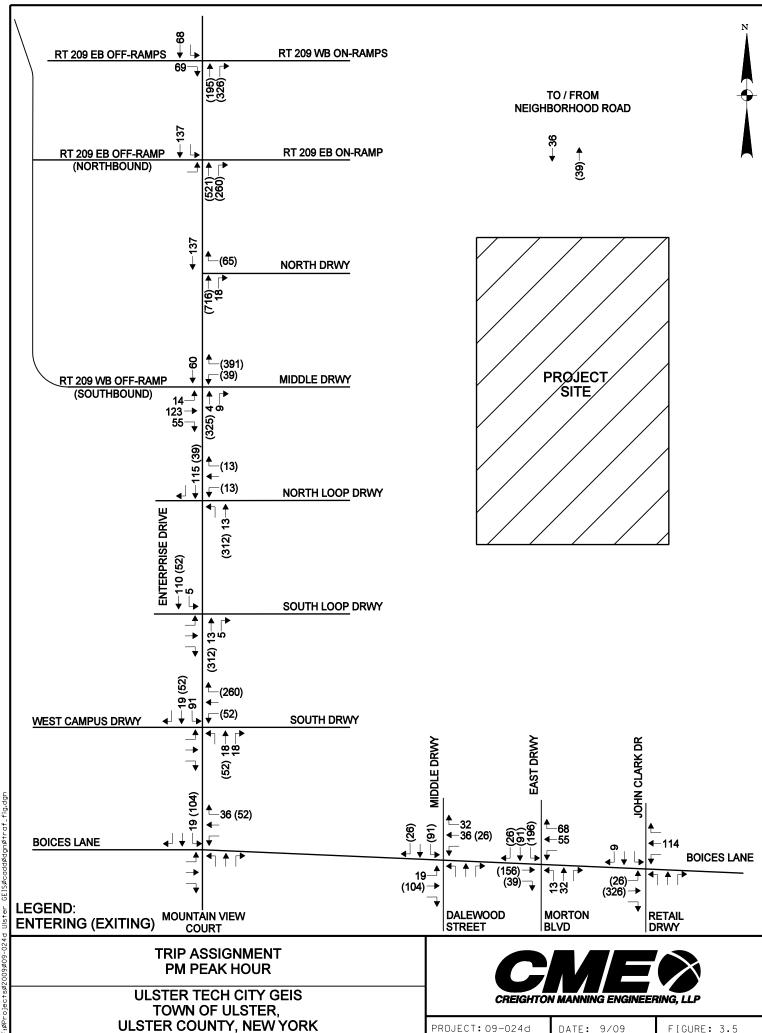
PROJECT: 09-024d DATE: 9/09



ULSTER COUNTY, NEW YORK

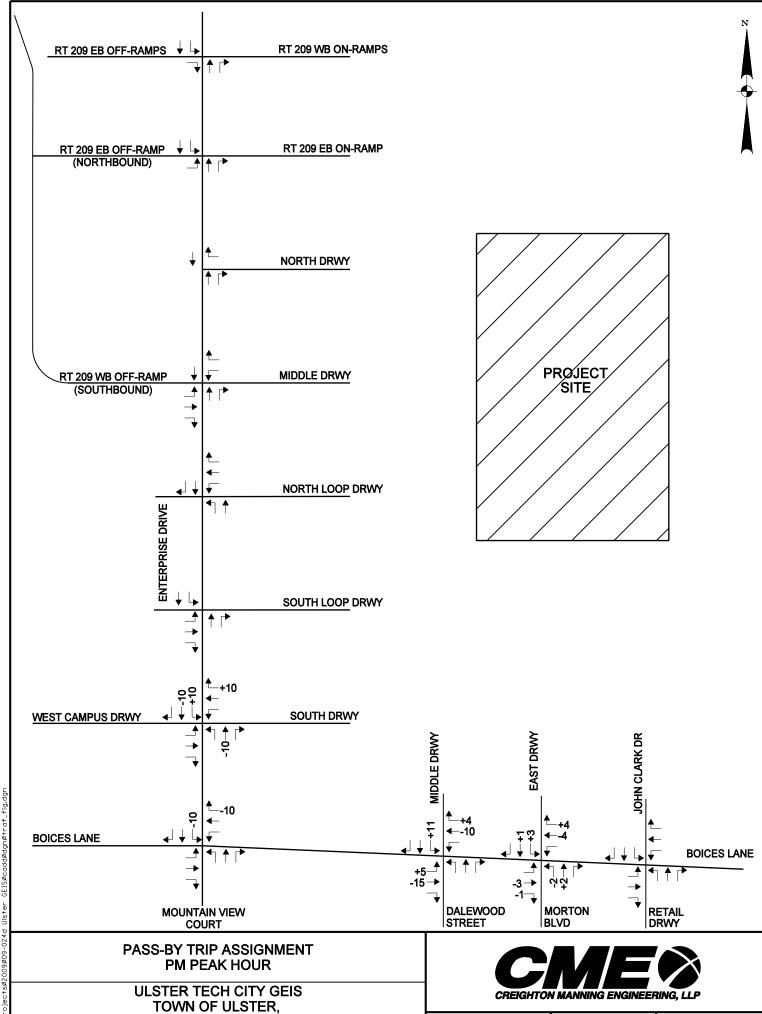
PROJECT: 09-024d

DATE: 9/09



PROJECT: 09-024d

DATE: 9/09

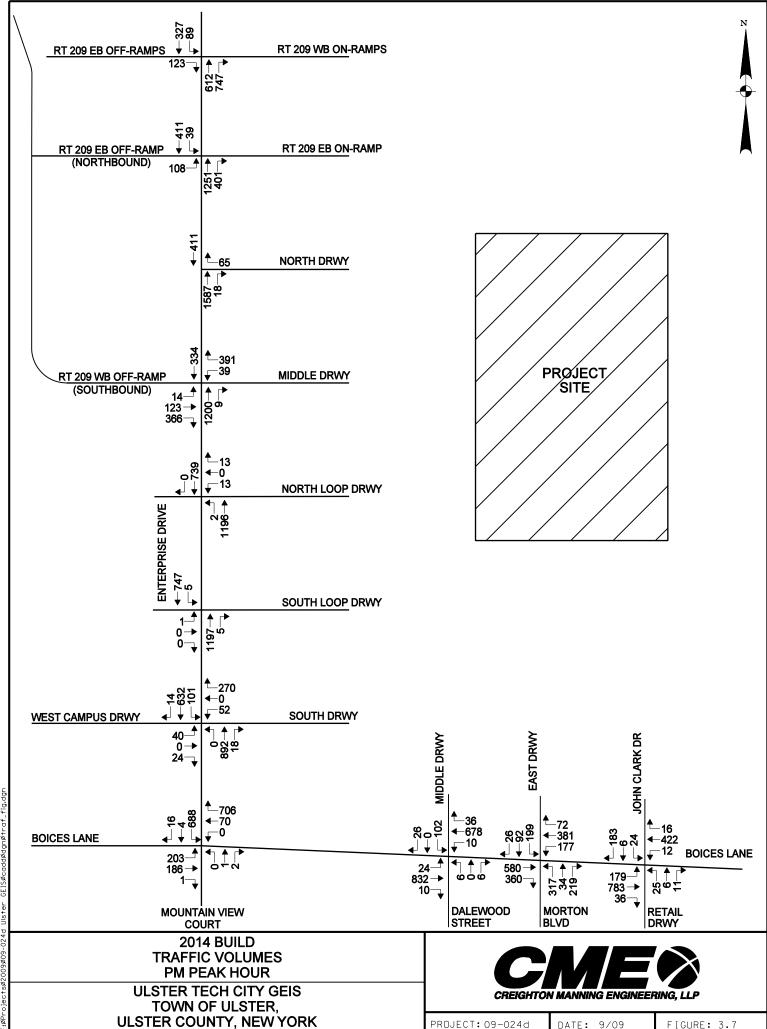


ddor an

**ULSTER COUNTY, NEW YORK** 

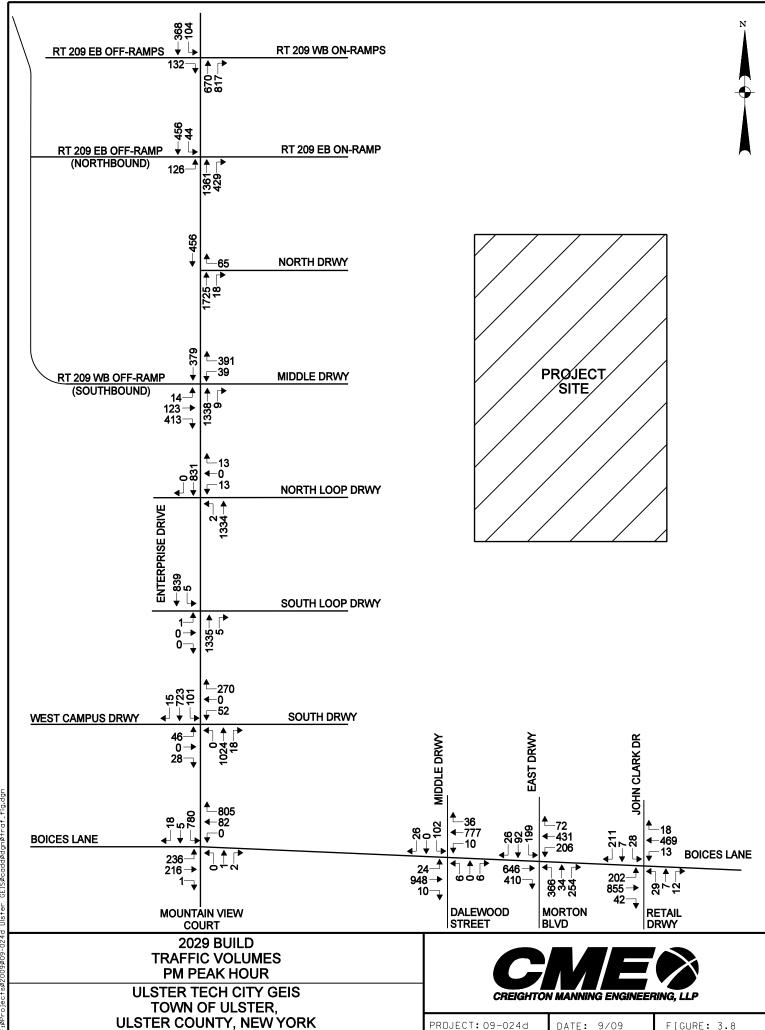
PROJECT: 09-024d

DATE: 9/09



PROJECT: 09-024d

DATE: 9/09



PROJECT: 09-024d

DATE: 9/09

# CHAPTER IV ANALYSIS

## A. Capacity/Level of Service Analysis

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using the Synchro Software (version 6.14) and Highway Capacity Software (HCS+ version 5.3) which automate the procedures contained in the *2000 Highway Capacity Manual*. Levels of service range from A to F with level of service A conditions considered excellent with very little delay while level of service F generally represents conditions with very long delays. Further detailed information about levels of service criteria is included in Appendix F.

The relative impact of the proposed project can be determined by comparing the level of service during the 2014 and 2029 design years for the No-Build and Build traffic volume conditions. Table 4.1 shows the results of the Level of Service calculations.

Table 4.1 - Level of Service Summary

Intersection		ō		PM Peak Hour						
		Control	2009	No-	4 Design Y	ear Build w/	No-	29 Design Y	ear Build w/	
			ŏ	Existing	Build	Build	Imp	Build	Build	Imp
1	Enterprise Dr/US Route 209 NY Route 199 WB Ramps	/	TW							
	Enterprise Dr SB	LT		A (8.6)	A (8.7)	A (9.6)		A (9.1)	B (10.1)	
2	Enterprise Dr/US Route 209 Route 199 EB Ramps	/NY	S							
	Route 209 EB Enterprise Dr NB	LL TT		B (18.0) A (4.2)	B (18.3) A (4.2)	C (25.1) A (4.5)		B (16.5) A (4.5)	C (24.1) A (4.9)	
	Enterprise Dr SB	LTT		A (3.5)	A (3.5)	A (2.9)		A (3.6)	A (3.0)	
		Overall		A (5.3)	A (5.3)	A (5.4)		A (5.4)	A (5.7)	
3	Enterprise Dr/North Drwy Enterprise DR SB	L	TW	B (12.8)	B (13.4)			C (15.2)		
	North Drwy WB	L R		D (27.9)	D (31.1)	  C (19.4)		E (41.8)	 C (22.3)	 
4	Enterprise Dr/US Route 209 Off Ramp/Middle Drwy		TW			, ,			, ,	
	Route 209 EB Off EB	LT R		D (31.2) B (11.7)	D (34.9) B (12.3)	F (>999) B (14.7)		E (48.8) B (13.8)	F (>999) C (17.5)	
	Middle Drwy WB	LR		D (31.9)	E (36.4)	F (>999)		F (53.0)	F (>999)	
	Route 209 EB Off EB	LT R	S				B (17.3) A (7.5)			B (19.2) B (13.2)
	Middle Drwy WB	L					B (17.1)			B (19.1)
	Enterprise Dr NB	R TTR					C (29.9) B (15.3)			C (34.2) B (19.3)
	Enterprise Dr NB	TT					A (7.8)			A (8.2)
		Overall					B (15.6)			B (19.0)
5	Enterprise Dr/North Loop Dr	-	TW							
	Enterprise Dr NB North Loop Drwy WB	LTT LTR		A (0.1) D (27.6)	A (0.1) D (31.7)	A (0.1) F (146.2)	A (9.4) F (122.2)	A (0.1) E (46.9)	A (0.1) F (382.4)	A (9.8) F (262.3)
6	Enterprise Dr/South Loop D	rwy	TW							
	Enterprise Dr SB	ΤŢ		A (0.0)	A (0.0)	A (0.6)	 C (45 0)	A (0.0)	A (0.7)	 C (47.0)
	South Loop Drwy EB	[L] LTR		D (28.2)	D (32.0)	F (64.6)	C (15.0) F (64.3)	E (44.6)	F (100.5)	C (17.8) F (99.7)
7	Enterprise Dr/West Campus /South Drwy	•	S							
	West Campus Drwy EB	Z T		C (20.5) B (18.9)	C (21.3) B (19.4)	B (12.8) B (11.2)	B (17.7) B (16.6)	C (21.0) B (18.7)	B (15.9) B (13.2)	C (21.0) B (19.6)
	South Drwy WB	LTR		B (19.7)	C (20.4)	B (14.0)	′	B (19.8)	B (18.0)	` ´
		[LT] [R]					B (17.3) B (19.6)			C (20.4) C (24.0)
	Enterprise Dr NB	TTR		A (3.9)	A (3.9)	A (8.9)	B (15.0)	A (4.1)	A (9.0)	C (20.4)
	Enterprise Dr SB	L TTR		A (2.9) A (3.5)	A (2.8) A (3.5)	B (17.1) A (7.8)	B (14.6) A (9.4)	A (2.8) A (3.6)	C (26.8) A (7.6)	D (37.7) B (12.3)
		Overall		A (5.6)	A (5.6)	A (9.9)	B (14.0)	A (5.8)	B (10.9)	B (12.3)
8	Enterprise Dr/Boices Ln/		S	(/	(/	(/	( 1-7)	(/	(/	( 2.3)
	Mountain View Ct Boices Ln EB	1		D (39.6)	D (52.9)	E (65.8)	D (55.0)	F (113.3)	F (138.6)	D (E1 E)
	DOICES THED	L TR		B (19.2)	C (20.4)	C (22.6)	D (35.0) D (37.9)	C (25.7)	C (29.3)	D (51.5) D (42.9)
	Boices Ln WB	LT		C (30.2)	C (31.0)	C (33.2)	C (29.1)	C (32.8)	D (35.0)	D (49.2)
	Mountain View Ct NB	R LTR		A (0.5) C (31.1)	A (0.6) C (31.7)	A (0.7) C (33.3)	A (0.7) C (34.9)	A (0.8) D (35.1)	A (0.9) D (37.1)	A (0.9) D (44.6)
	Enterprise Dr SB	L		B (19.5)	C (31.7)	C (33.3)	C (34.9)	C (27.1)	C (34.7)	D (44.0)
	,	TR		B (10.1)	A (10.0)	A (9.6)	A (1.8)	A (10.0)	A (9.6)	A (1.6)
	Key: TW, AW, S, F	Overall		B (17.3)	C (20.3)	C (23.9)	C (22.8)	C (33.6)	D (39.7)	C (28.4)

TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches

L, T, R = Left-turn, through, and/or right-turn movements

L[T]R = LR represents the existing geometry, LTR represents the future geometry X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

-- = Not applicable

**Table 4.1 – Level of Service Summary (Continued)** 

Intersection				PM Peak Hour						
		ıtro	2009	2014 Design Year		2029 Design Year				
			Control	Existing	No- Build	Build	Build w/ Imp	No- Build	Build	Build w/ Imp
9	Boices Ln/Middle Drwy/		TW				•			•
	Dalewood St		IVV							
	Boices Ln EB	L				A (0.9)			A (1.1)	
	Boices Ln WB	L				A (0.5)			A (0.5)	
	Dale wood St NB	LTR				D (33.2)			E (43.9)	
	Middle Drwy SB	LTR				F (745.5)			F (>999)	
	Boices Ln EB	LTR	S				A (7.8)			A (9.7)
	Boices Ln WB	LTTR					A (3.8)			A (3.8)
	Dale wood St NB	LTR					C (21.2)			C (23.8)
-	Middle Drwy SB	LTR					C (26.3)			C (30.7)
		Overall					A (7.7)			A (8.9)
10	Boices Ln/Morton Blvd/East	Drwy	S							
	Boices Ln EB	LT		D (38.6)	D (52.6)	F (124.9)		F (95.1)	F (182.7)	
		[TT]					C (25.4)			C (28.8)
		R		A (8.6)	A (8.7)	B (13.7)	C (20.1)	A (8.8)	B (14.5)	C (21.0)
	Boices Ln WB	L		B (15.4)	B (17.9)	B (18.2)	B (16.1)	C (24.9)	D (38.5)	D (35.4)
		T		B (10.9)	B (11.5)	B (10.7)	B (14.0)	B (12.6)	B (11.3)	B (18.9)
		R		A (0.0)	A (0.0)	A (8.0)	A (7.3)	A (0.0)	A (8.0)	C (20.5)
	Morton Blvd NB	LT		C (22.3)	C (23.8)	F (160.5)		C (28.4)	F (230.3)	
		R		A (9.6)	B (10.2)	B (11.1) 	 B (18.8)	B (10.8)	B (11.5)	C (22.2)
		[L] [TR]					C (27.0)			C (22.2) C (27.2)
	East Drwy SB	L		C (31.8)	C (32.9)	F (777.6)	C (21.4)	C (34.5)	F (879.6)	C (21.6)
	Last DIWy 3B	TR		C (31.0)	C (32.9)	D (35.1)	D (44.4)	C (33.3)	D (37.0)	D (47.9)
-		Overall		B (19.8)	C (24.2)	F (155.3)	C (21.6)	D (36.9)	F (182.7)	C (25.6)
11	Boices Ln/John Clark Dr/	3101ull	_	2 (10.0)	<u> </u>	. (100.0)	3 (21.0)	2 (00.0)	. (.52.1)	3 (20.0)
'	Plaza Drwy		S							
	Boices Ln EB	LTTR		A (4.5)	A (4.7)	A (5.1)	A (4.6)	A (4.9)	A (6.1)	A (4.2)
	Boices Ln WB	LT		A (4.3)	A (4.4)	A (3.9)		A (4.4)	A (3.9)	′
		R		A (3.4)	A (3.3)	A (2.6)		A (3.2)	A (2.5)	
		[LTTR]		′	′	′	A (2.9)	′	′	A (6.9)
	Retail Drwy NB	LT		B (14.2)	B (14.9)	B (19.6)	C (27.7)	B (15.7)	C (21.5)	C (30.7)
		R		B (13.5)	B (14.1)	B (18.5)	C (26.0)	B (14.7)	B (20.0)	C (27.9)
	John Clark Dr SB	LT		B (14.0)	B (14.6)	B (19.2)	C (27.1)	B (15.4)	C (21.0)	C (29.6)
		R		B (13.9)	B (14.5)	B (18.9)	C (26.6)	B (15.2)	C (20.5)	C (22.1)
		Overall		A (6.5)	A (6.6)	A (7.0)	A (7.6)	A (6.9)	A (7.9)	A (8.3)

Key:

TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches

L, T, R = Left-turn, through, and/or right-turn movements

L[T]R = LR represents the existing geometry, LTR represents the future geometry

X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

-- = Not applicable

The following observations are evident from this analysis. A summary of the proposed improvements is shown on Figure 4.1:

- 1) Enterprise Drive/US Route 209/NY Route 199 Westbound Ramps The analysis indicates that the southbound Enterprise Drive left-turn movement operates at a LOS A during the PM peak hour for Existing and No-Build conditions. With construction of the proposed project, this movement will continue to operate at very good levels of service. No mitigation is necessary at this intersection.
- 2) <u>Enterprise Drive/US Route 209/NY Route 199 Eastbound Ramps</u> The analysis indicates that this signalized intersection operates at an overall LOS

A during the PM peak hour for Existing and No-Build conditions with the northbound and southbound Enterprise Drive through movements operating at a LOS A and the eastbound US Route 209 Ramp left-turn movement operating at a LOS B. With construction of the proposed project, this intersection will continue to operate at an overall LOS A during the PM peak hour with the northbound and southbound approaches operating at a LOS A and the eastbound left-turn movement degrading to a LOS C. No mitigation is necessary at this intersection.

- 3) Enterprise Drive/North Driveway The analysis indicates that the southbound left-turn lane operates at a LOS B during the PM peak hour for Existing conditions and will operate at a LOS B/C during 2014 and 2029 No-Build conditions. The analysis also indicates that the westbound North Driveway left-turn lane currently operates at a LOS D and will operate at a LOS D/E during 2014 and 2029 No-Build conditions. With construction of the proposed project, it is recommended that the bagged traffic signal be removed and that this intersection be converted to a right-in/right-out only driveway. It is recommended that a stop-sign be installed on the westbound approach to control vehicles turning right from the development. It is noted that southbound left-turn vehicles will be served by the adjacent intersection to the south via a modified jug-handle that utilizes the adjacent parallel road for US Route 209 traffic as shown on Figure 4.2.
- 4) Enterprise Drive/US Route 209 Eastbound Off Ramp/Middle Driveway The analysis indicates that the eastbound shared left-turn/through lane currently operates at a LOS D during the PM peak hour for Existing conditions and will operate at a LOS D/E for the 2014 and 2029 No-Build condition. The yield controlled right-turn lane operates at a LOS B during the PM peak hour for Existing and both No-Build conditions. The analysis also indicates that the westbound Middle Driveway approach currently operates at a LOS D during the PM peak hour and will degrade to a LOS E/F during the 2014 and 2029 No-Build conditions. With the construction of the proposed project, the yield controlled eastbound right-turn lane will operate at a LOS B/C during the 2014 and 2029 Build conditions while the stop controlled eastbound and westbound approaches will operate at a LOS F.

A preliminary Peak Hour signal warrant analysis was conducted at this intersection to determine if traffic volumes will meet the warrants for the installation of a traffic signal for Build conditions. The hourly traffic volumes were compared to the signal warrant criteria set forth in the Federal *Manual on Uniform traffic Control Devices for Streets and Highways* (MUTCD), 2003 Edition. This publication specifies the minimum criteria that must be met in order for a new traffic signal to be justified. The Peak Hour warrant is met when for any one hour of an average day, points plotted on the graph presented on Figure 4C-4 of the MUTCD fall above the appropriate curve as contained in Appendix G. A review of the 2014 and 2029 Build traffic

volumes indicates that this warrant is satisfied during the PM peak hour. Therefore, it is recommended that this intersection operate under traffic signal control for Build conditions.

As shown in Figure 4.2, it is recommended that the southbound left-turns into the site utilize a modified jug handle to access the parallel road and cross Enterprise Drive. It is also recommended that the eastbound yield controlled right-turn lane be reconstructed to utilize the traffic signal at the Middle Driveway so drivers do not have to look back over their shoulders to merge into southbound traffic on Enterprise Drive and that the westbound Middle Driveway approach provide separate left and right turn lanes. The level of service analysis indicates that this intersection will operate at an overall LOS B with all movements operating at a LOS C or better during the 2014 and 2029 Build conditions.

5/6) Enterprise Drive/North & South Loop Driveways – The analysis indicates that the northbound and southbound approaches operate at a LOS A during the PM peak hour for Existing and both No-Build conditions. The analysis also indicates that the eastbound and westbound Loop Driveway approaches will operate at a LOS D during the PM peak hour for Existing and 2014 No-Build conditions and a LOS E for 2029 No-Build conditions. With the construction of the proposed project, the northbound and southbound approaches will continue to operate at a LOS A while the eastbound and westbound Loop Driveway approaches will degrade to a LOS F during both design years.

It is recommended that exclusive northbound and southbound left-turn lanes be constructed on Enterprise Drive to remove all left-turning traffic from the through lanes. The analysis indicates that the northbound and southbound left-turn movements will continue to operate adequately and that the eastbound and westbound approaches will still operate at LOS F. This is reflective of the high through volumes on Enterprise Drive during the PM peak hour. It is noted that the Loop Driveways are ceremonial entrances that will serve low traffic volumes. Motorists exiting the Loop Driveway intersections will have the option of using the adjacent traffic signals so no additional mitigation is necessary.

7) Enterprise Drive/West Campus Driveway/South Driveway – The analysis indicates that this signalized intersection operates at an overall LOS A during the PM peak hour for Existing and both No-Build conditions with all movements operating at a LOS C or better. With construction of the proposed project, this intersection will operate at an overall LOS A during the PM peak hour for the 2014 Build condition and an overall LOS B for the 2029 Build condition. However, it is noted that this intersection is located approximately 300-feet north of the traffic signal at the Enterprise Drive/Boices Lane/Mountain View Court intersection. The analysis at this adjacent intersection indicates that the heavy southbound left-turn movement

will queue back toward and possibly through the West Campus Driveway/South Driveway intersection. Therefore, it is recommended that these intersections operate under a coordinated signal system to ensure that the southbound queue on Enterprise Drive does not block side street traffic from entering and exiting the West Campus Driveway/South Driveway intersection. It is also recommended that the westbound South Driveway approach provide an exclusive left-turn lane and a shared through/right-turn lane. The analysis indicates that this intersection will operate at an overall LOS B with these improvements under the 2014 and 2029 build conditions. No additional mitigation is necessary at this intersection.

- 8) Enterprise Drive/Boices Lane/Mountain View Court - The analysis indicates that this signalized intersection currently operates at an overall LOS B during the PM peak hour for Existing conditions and will operate at an overall LOS C during the PM peak hour for the 2014 and 2029 No-Build conditions. It is noted that the eastbound Boices Lane left-turn lane will operate at a LOS F during the 2029 No-Build condition. With construction of the proposed project, this intersection will operate at an overall LOS C/D during the PM peak hour with the eastbound Boices Lane left-turn lane operating at a LOS E/F during the 2014 and 2029 Build conditions. However and as noted above, the heavy southbound left-turn movement will also gueue back toward the West Campus Driveway/South Driveway intersection located approximately 300-feet to the north. Therefore, it is recommended that these intersections operate under a coordinated signal system to ensure that the southbound queue on Enterprise Drive does not block side street traffic from entering and exiting the West Campus Driveway/South Driveway intersection. The analysis indicates that this intersection will continue to operate at an overall LOS C with all movements operating at a LOS D or better. No additional mitigation is necessary at this intersection.
- 9) Boices Lane/Middle Driveway/Dalewood Street There is an existing site driveway on Boices Lane located between Elmwood Street and Locust Street. It is recommended that this site driveway be shifted to the west opposite Dalewood Street which is the approximate midpoint between Enterprise Drive and Morton Boulevard, and will improve access along Boices lane and into the residential land uses on the south side of Boices Lane. The analysis indicates that the northbound Dalewood Street approach will operate at a LOS D/E during the 2014 and 2029 design years while the southbound Middle Driveway approach will operate at a LOS F during the PM peak hour under stop sign control. The eastbound and westbound Boices Lane approaches would operate at a LOS A during the PM peak hour under unsignalized control.

A preliminary Peak Hour signal warrant analysis was conducted at this intersection to determine if traffic volumes will meet the warrants for the installation of a traffic signal for Build conditions. The hourly traffic volumes

were compared to the signal warrant criteria set forth in the MUTCD, 2003 Edition. The Peak Hour warrant is met when for any one hour of an average day, points plotted on the graph presented on Figure 4C-4 of the MUTCD fall above the appropriate curve as contained in Appendix G. A review of the 2014 and 2029 Build traffic volumes indicates that this warrant is satisfied during the PM peak hour. Therefore, it is recommended that a traffic signal be installed at this intersection for Build conditions. The analysis indicates that this intersection will operate at an overall LOS A with all movements operating at a LOS C or better during the PM peak hour for both Build conditions. No additional mitigation is necessary.

10/11) <u>Boices Lane/Morton Boulevard/East Driveway</u> – The analysis indicates that this signalized intersection currently operates at an overall LOS B during the PM peak hour and will degrade to an overall LOS C/D during the 2014 and 2029 No-Build conditions with the eastbound left-turn/through approach operating at a LOS F during the 2029 No-Build condition.

With construction of the proposed project, this intersection will degrade to an overall LOS F with the eastbound and northbound shared left-turn/through movement and the southbound left-turn movement operating at a LOS F during the PM peak hour for both Build conditions. It is recommended that the existing northbound Morton Boulevard approach be re-stripped to provide an exclusive left-turn lane and a shared through/right-turn lane. It is also recommended that a second eastbound through lane be constructed on Boices Lane and extended to the John Clark Drive/Driveway intersection and that eastbound left-turns into the site be restricted. This improvement is shown conceptually on Figure 4.3 as an asymmetrical widening to the north. The concept shows that ROW will need to be provided by the Tech City Office Park to accommodate the roadway widening project along the property frontage to the north of Boices Lane and that some existing utilities would need to be relocated. Widening to the north will avoid impacts to private property on the south (such as Stewarts) which are not within the control of the Tech City Office Park. It is noted that NYSDOT currently has a \$410,000 grade crossing improvement project scheduled for 2010 which will upgrade circuits, gates, and flashers at this location. A meeting was held with representatives from the Town, Ulster County, and the NYSDOT and it was agreed that the NYSDOT project should explore the possibility of widening the Boices Lane railroad crossing to 4-lanes with pedestrian crossing accommodations within the railroad ROW. Mitigation for the proposed development would be completed along Boices Lane but outside the railroad ROW. It is also noted that it may be desirable to provide an exclusive left-turn lane and two through lanes with a shared right-turn lane on the westbound approach at this location to maximize intersection capacity. This alternative would require a 5-lane cross-section over the Boices Lane railroad crossing. The need for this additional lane could be addressed during final design including additional analysis of the AM peak hour and railroad pre-emption.

In addition to the proposed geometric improvements, the existing traffic signal should also be coordinated with the traffic signal located at the Boices Lane/John Clark Drive/Driveway intersection located approximately 275-feet to the east. The level of service analysis indicates that this intersection will operate at an overall LOS C with all movements operating at a LOS D or better during the PM peak hour under the 2014 and 2029 Build condition with these improvements.

Boices Lane/John Clark Drive/Plaza Driveway – The analysis indicates that this signalized intersection operates at an overall LOS A during the PM peak hour for Existing and No-Build conditions. It is recommended that the eastbound approach be re-stripped to provide a shared left-turn/through lane and a shared through/right-turn lane in order to line up with the proposed improvements at the Morton Boulevard/East Driveway intersection. It is also recommended that this intersection be coordinated with the Boices Lane/Morton Boulevard/East Driveway intersection as noted above and shown in Figure 4.3. With construction of the proposed project, this intersection will continue to operate at an overall LOS A with all movements operating at a LOS C or better.

It is noted that the existing CSX railroad tracks cross Boices Lane between the Morton Boulevard/East Driveway intersection and John Clark Drive/Plaza Driveway intersection and the traffic signals are pre-empted when a train is present. Any improvements at the intersection shall be coordinated with the NYSDOT to insure that adequate pre-emption is maintained. Based on discussions with the County, the geometry at the intersections should allow some lane groups to flow during pre-emption to minimize delay, particularly the exclusive northbound left-turn lane and the separate eastbound right-turn lane at the Boices Lane/Morton Boulevard/East Driveway intersection could be allowed operate during the pre-emption phase thus relieving traffic congestion on these heavy movements. In addition, the southbound shared left-turn/through lane at the Boices Lane/John Clark Drive/Plaza Driveway intersection could also be allowed to operate during times of the traffic signal pre-emption. However, the proposed re-stripping of the westbound Boices Lane approach to this intersection will remove the separate westbound rightturn lane causing right-turning vehicles to wait while the crossing gates are closed for a train. It is noted that that the westbound right-turn volume is less than 20 vehicles per hour during the PM peak hour.

## B. Threshold Analysis

A threshold sensitivity analysis was conducted in order to determine when the proposed improvements at the Boices Lane/Morton Boulevard/East Driveway intersection and at the Boices Lane/John Clark Drive/Plaza Driveway intersection would be required to maintain adequate traffic operations at these locations. The level of

service analysis is provided for the 2014 design year and the detailed levels of service reports are included in Appendix H. Table 4.2 shows the results of the Level of Service calculations.

Table 4.2 – Threshold Level of Service Summary

Intersection				PM Peak Hour					
		Control	2014 No-Build	2014 Build 25% Threshold	2014 50% Th				
10	Boices Ln/Morton Blvd/East Drwy	S	Existing Timing	Existing Timing	Existing Timing	Timing Optimization			
	Boices Ln EB	.T R	D (52.6) A (8.7)	D (54.4) A (10.0)	E (69.0) B (12.9)	D (46.6) B (10.4)			
	Boices Ln WB	L T	B (17.9) B (11.5)	B (17.8) B (11.1)	B (17.3) B (10.4)	C (21.9) B (10.5)			
	Morton Blvd NB	R T R	A (0.0) C (23.8) B (10.2)	A (8.4) C (27.3) B (10.7)	A (7.8) D (43.5) B (11.0)	A (7.9) D (37.6) B (12.2)			
		R	C (32.9) C (31.9)	C (34.5) C (30.1)	C (33.5) C (25.8)	D (50.9) C (28.6)			
	Over	all	C (24.2)	C (25.8)	C (32.6)	C (27.0)			
11	Boices Ln/John Clark Dr/Plaza Drw	/ S	Existing Timing	Existing Timing	Existing Timing	Timing Optimization			
	Boices Ln EB LT		A (4.7)	A (4.7)	A (4.8)	A (4.7)			
	Boices Ln WB	.T   R	A (4.4) A (3.3)	A (4.4) A (3.2)	A (4.2) A (3.0)	A (4.2) A (3.0)			
	Retail Drwy NB	T.	B (14.9)	B (15.5)	B (16.5)	B (16.5)			
	John Clark Dr SB	R .T R	B (14.1) B (14.6) B (14.5)	B (14.7) B (15.2) B (15.1)	B (15.6) B (16.2) B (16.1)	B (15.6) B (16.2) B (16.1)			
	Over		A (6.6)	A (6.6)	A (6.7)	A (6.6)			

Key: TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches

L, T, R = Left-turn, through, and/or right-turn movements X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

The threshold analysis indicates these study area intersections will operate at the same levels of service with the development of up to 25 percent of the proposed project and no improvements. The analysis also indicates that with the development of up to 50 percent of the proposed project, these intersections will experience a level of service degradation on several approaches. However, with signal timing improvements, the intersections will operate adequately with up to 50 percent of the development traffic. Any development above and beyond 50 percent of the *Tech City Office Park* will likely require the geometric improvements detailed in the previous section to increase capacity at these intersections. Therefore, it is recommended that the signals be monitored and optimized after the occupancy of 25 percent of the proposed project. It is also recommended that the traffic volumes and operations at these intersections be monitored annually and/or coinciding with the development phases of the *Tech City* 

Office Park to ensure that the signal timings will continue to maintain adequate traffic operations prior to the construction of the proposed geometric improvements.

## C. Roundabout Analysis

An alternative intersection evaluation was completed to determine how six of the existing study area intersections would operate under roundabout control. Intersection evaluations were made using the Sidra Software (version 4.0). The level of service is provided for the 2014 and 2029 design years and the detailed levels of service reports are included in Appendix I. Table 4.3 shows the results of the Level of Service calculations.

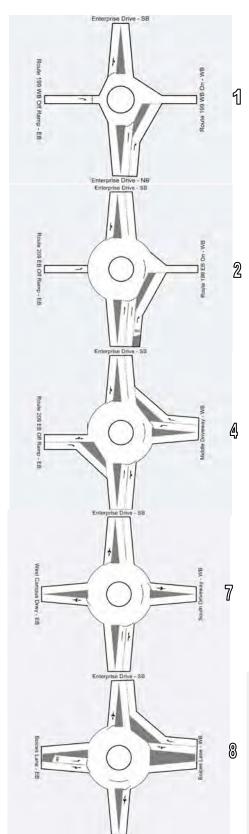
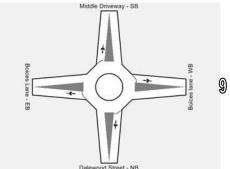


Table 4.3 - Roundabout Level of Service Summary

lata:::					
inters	section	tro	PM Peak Hour		
			Control	2014 Design Year	2029 Design Year
1	Enterprise Dr/US Route 209/			- I Gui	i oui
•	NY Route 199 WB Ramps		R		
	Enterprise Dr NB	TTR		A (5.5)	A (5.7)
	Enterprise Dr SB	LT		A (5.0)	A (5.0)
	Route 199 EB	L		B (15.0)	B (15.5)
	Ov	/erall		A (5.9)	A (6.1)
2	Enterprise Dr/US Route 209/		R		
	NY Route 199 EB Ramps		1		
	Enterprise Dr NB	TTR		A (6.1)	A (6.5)
	Enterprise Dr SB	LT		A (5.9)	A (5.9)
	Route 209 EB	R		A (8.7)	A (9.7)
		/erall		A (6.2)	A (6.5)
4	Enterprise Dr/US Route 209 WE	3 Off	R		
	Ramp/Middle Drwy	TTD		A (0.0)	A (O A)
	Enterprise Dr NB	TTR		A (6.2)	A (6.4)
	Middle Drwy WB	LR		B (15.5)	C (24.8)
	Enterprise Dr SB Route 209 WB Off EB	LT LTR		A (5.8)	A (5.8)
		/erall		A (6.7)	A (7.7)
	-			A (7.7)	A (9.1)
7	Enterprise Dr/West Campus Dry South Drwy	wy/	R		
	Enterprise Dr NB	TTR		A (5.9)	A (6.1)
	South Drwy WB	LTR		A (4.6)	B (14.6)
	Enterprise Dr SB	TR		A (5.8)	A (6.0)
	West Campus Drwy EB	LTR		B (15.2)	C (25.3)
		/erall		A (7.3)	A (8.2)
8	Enterprise Dr/Boices Ln/		_	()	()
	Mountain View Ct		R		
	Mountain View Ct NB	LTR		B (13.7)	B (18.0)
	Boices Ln WB	LTR		A (5.9)	A (6.0)
	Enterprise Dr SB	LTR		B (12.5)	B (12.8)
	Boices Ln EB	LTR		B (15.3)	C (21.4)
	Ov	/erall		B (11.0)	B (13.1)
9	Boices Ln/Middle Drwy/Dalewoo	d St	R		
	Dalewood St NB	LTR		B (15.9)	B (19.8)
	Boices Ln WB	LTR		A (5.3)	A (5.3)
	Middle Drwy SB	LTR		B (14.1)	B (15.5)
	Boices Ln EB	LTR		A (7.1)	A (9.7)
	Ov	/erall		A (7.0)	A (8.4)

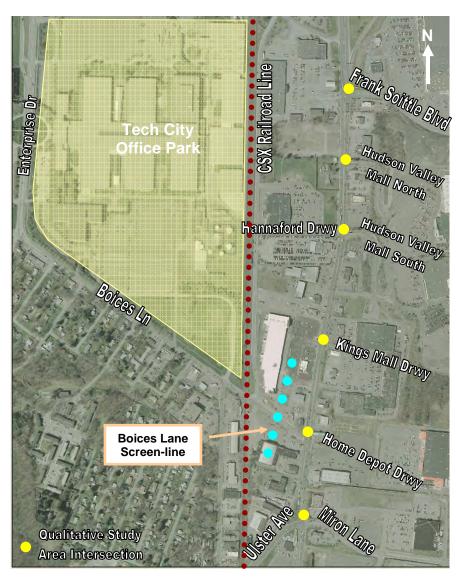
Key: R = Roundabout controlled intersection
NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound approaches
L, T, R = Left-turn, through, and/or right-turn movements X (Y.Y) = Level of Service (Average delay in seconds per vehicle)



The analysis indicates that the six study area intersections will operate at an overall LOS B or better with all approaches operating at a LOS C or better under roundabout control with the geometry shown to the left of the table. In general, two northbound lanes would need to be provided on Enterprise Drive from the Boices Lane intersection to the Route 209/199 Ramp. This analysis indicates that the proposed development would not preclude a roundabout alternative if it were progressed as part of a potential public project along Enterprise Drive and Boices Lane. However, there will be impacts to ROW with the construction of a roundabout at several of the proposed intersections as shown in Figure 4.4. In addition, the spacing between the two roundabouts located at the West Campus Driveway/South Driveway and Boices Lane/Mountain View Court intersections could be problematic and will require more detailed analysis. It is noted that signalized control will provide adequate operations at these study area intersections after the construction of the proposed project and is the recommended mitigation.

#### D. Screen-Line Assessment

A qualitative intersection evaluation was conducted for several additional intersections located to the east along Route 9W as shown on the following aerial photograph. The assessment was conducted to determine if the proposed development will generate more trips through these intersections than previously anticipated as part of the *Frank Sottile EIS*. An increase in traffic from the *Tech City Office Park* could modify the recommendations found in the *Frank Sottile EIS*. Therefore, a screen-line traffic volume comparison was conducted on Boices Lane just west of Route 9W to determine the difference between traffic associated with re-occupancy of the IBM campus and other background traffic growth analyzed in the *Frank Sottile EIS* and traffic associated with the re-development of the site for the proposed *Tech City Office Park*. The location of the screen-line is shown on Aerial Photograph #1.



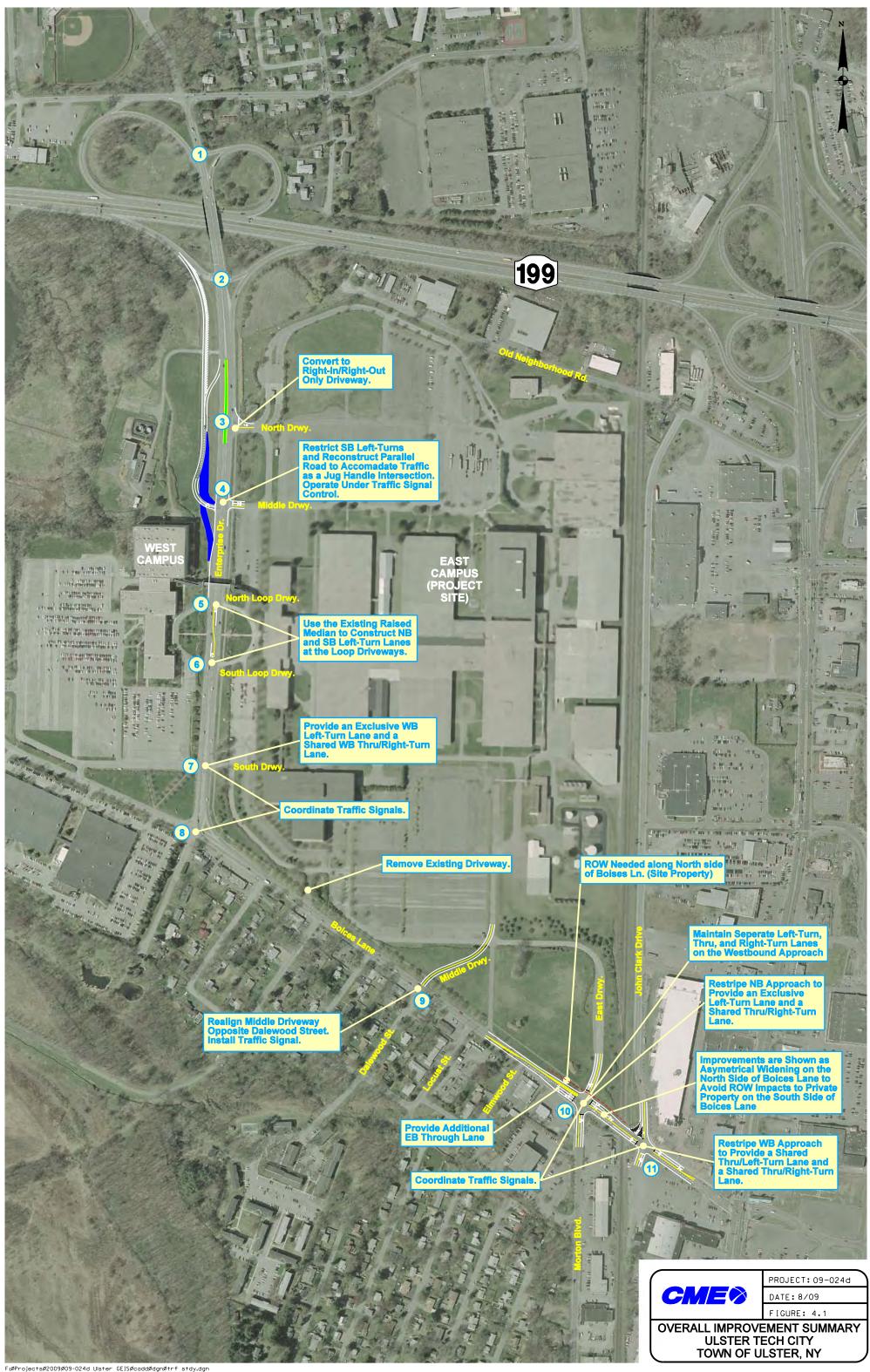
Aerial Photograph #1 - Boices Lane Screen-Line

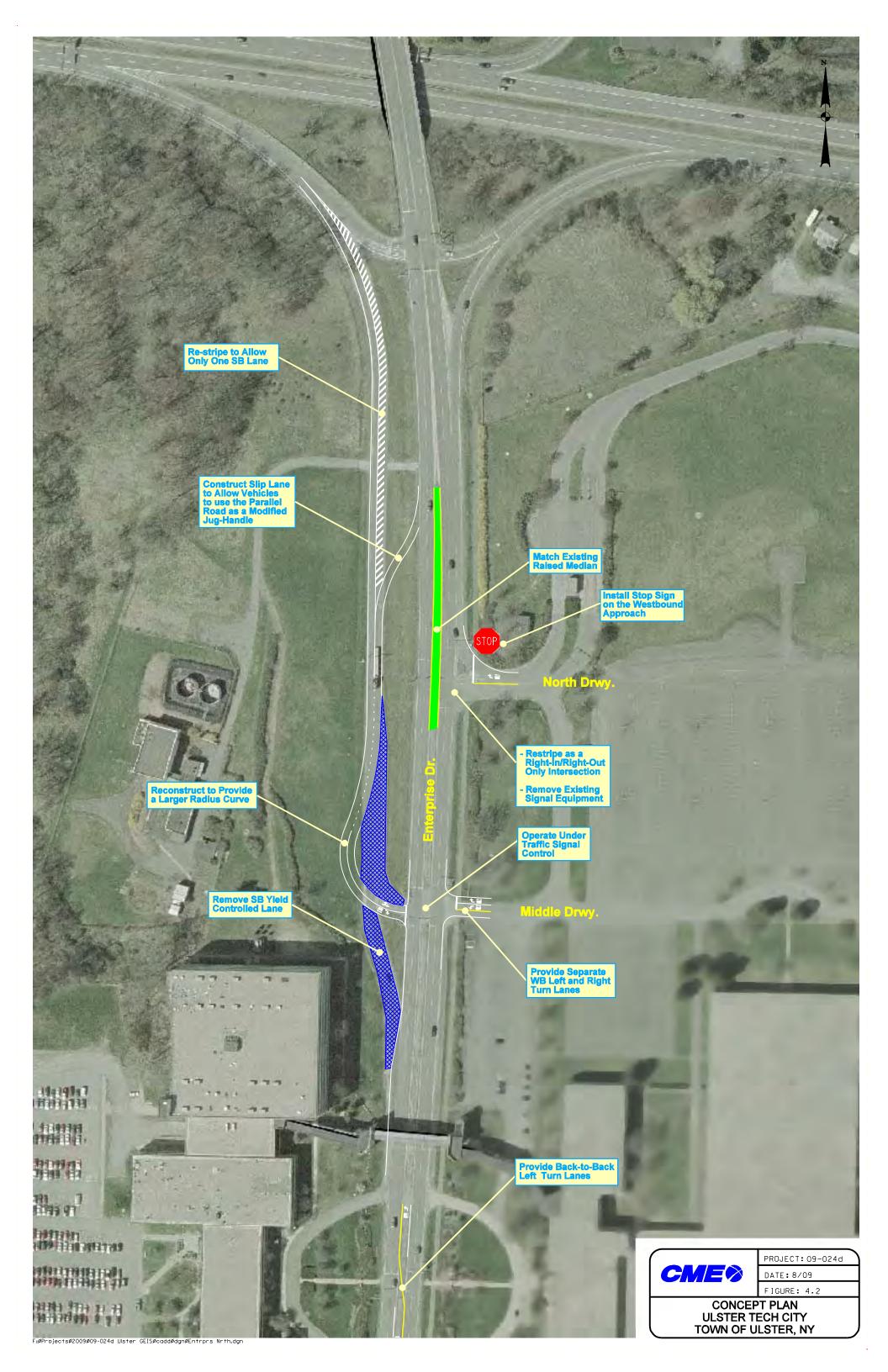
A review of the 2028 traffic volumes used in the corridor analysis for the *Frank Sottile EIS* indicates that there were 1,256 PM peak hour trips at the Boices Lane screen-line. However, the Existing 2009 turning movement counts indicate that there are currently 780 PM peak hour trips at the Boices Lane screen-line. Table 4.4 shows the differences between 2014 and 2029 design year traffic volumes and the 2028 future traffic volumes analyzed in the *Frank Sottile EIS* on Boices Lane at the screen-line.

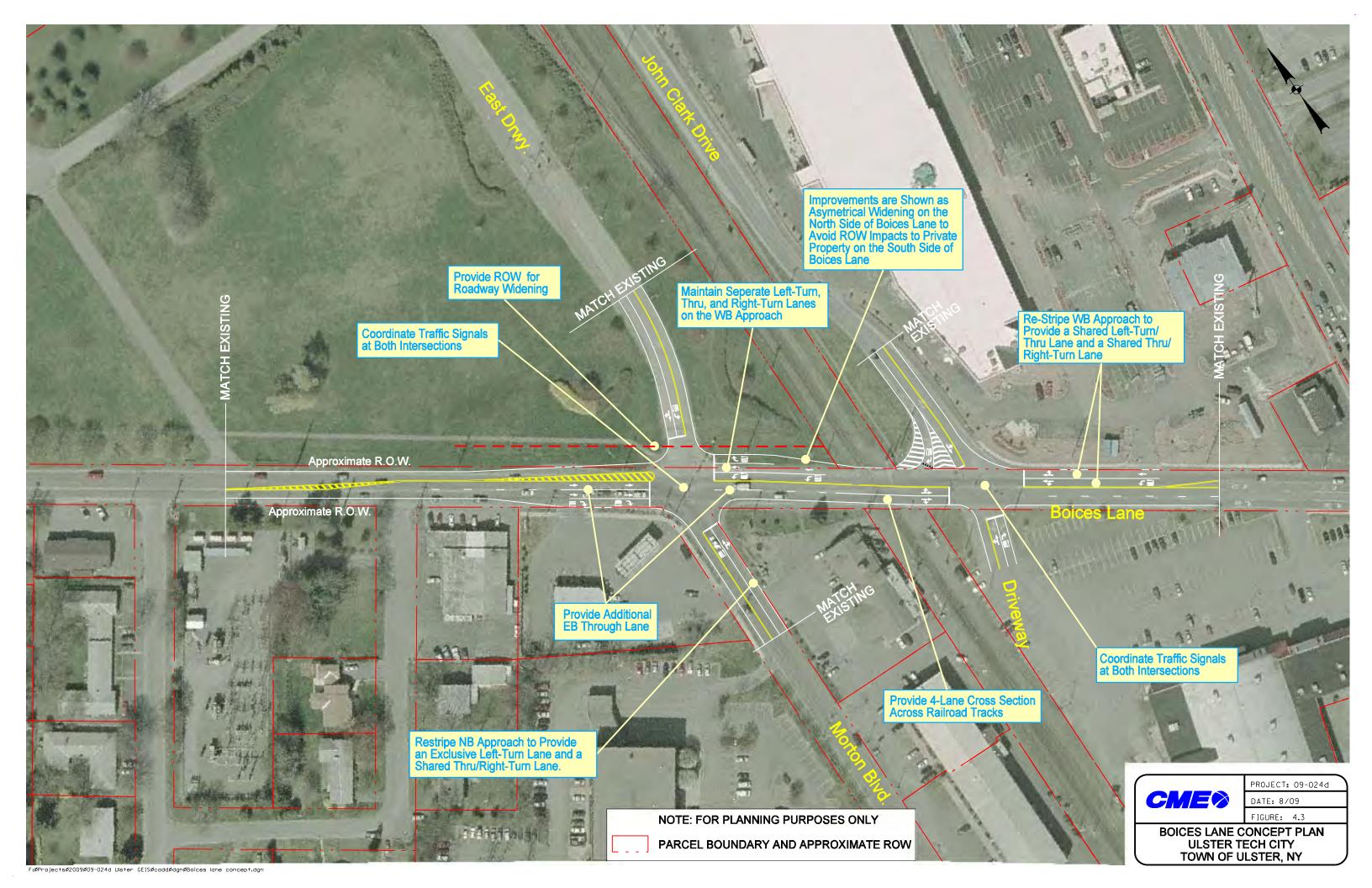
**Table 4.4 – Traffic Volume Screen-Line Comparison** 

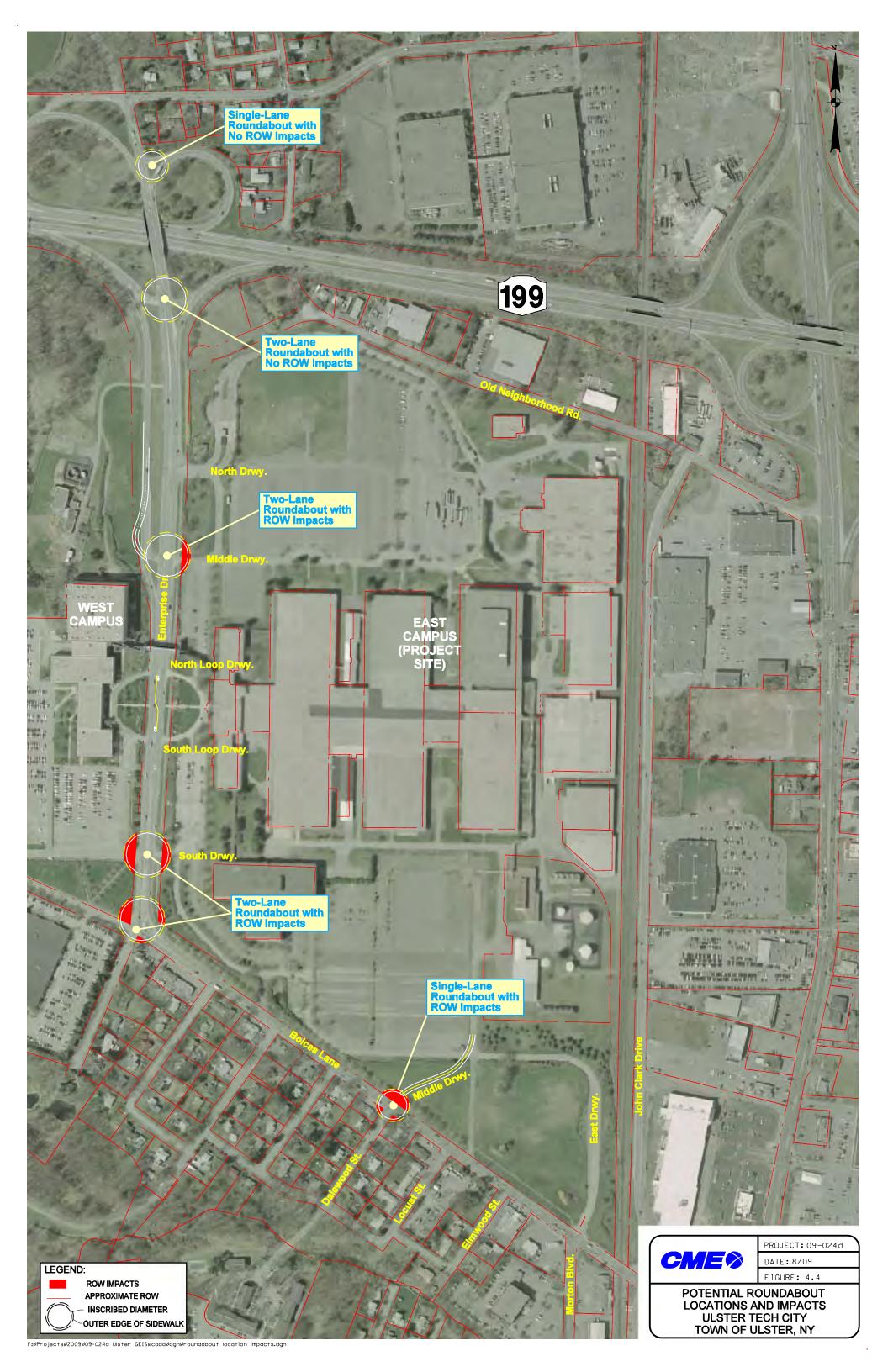
Condition	Two-Way Volume at	Difference From Screen-
	Boices Lane Screen-Line	line Threshold
Frank Sottile EIS 2028 Volume (Screen-Line Threshold)	1,256 vph	
2014 No-Build Volume	860 vph	-396 vph
2014 Build Volume	1,268 vph	+12 vph
2029 No-Build Volume	994 vph	-262 vph
2029 Build Volume	1,398 vph	+142 vph

The evaluation indicates that there are similar volumes on Boices Lane during the Build 2014 design year and the 2028 Frank Sottile EIS design year. Therefore, it is not anticipated that the construction of the proposed Tech City Office Park will change any of the conclusions found in the Frank Sottile EIS in the short term since the original Route 9W corridor analysis evaluated a similar number of trips generated by the redevelopment of this parcel. The evaluation also indicates that continued background growth will cause the Build 2029 traffic volumes to exceed the 2028 Frank Sottile EIS traffic volume threshold by approximately 142 vehicles per hour (vph). Therefore, it is recommended that traffic volumes and queuing on Boices Lane be monitored to determine the need for a force-off loop detector on the eastbound Boices Lane approach of the Route 9W intersection. This improvement would ensure that the queue will not extend through the John Clark Drive intersection and block the existing railroad crossing.









#### **CHAPTER V**

#### **CONCLUSIONS AND RECOMMENDATIONS**

Based on the results of this Traffic Impact Study completed for the proposed *Tech City Office Park*, the following conclusions and recommendations are provided:

- A. The existing East Campus is an approximate 2,164,000 SF development consisting primarily of office and industrial space. The proposed development plan includes the demolition of approximately 290,000 SF of obsolete buildings, the reuse of 558,000 SF of two existing buildings for interior parking, the continued use of 1,318,000 SF of existing buildings, and the construction of approximately 645,000 SF of new buildings. Therefore, the building gross floor area of the new campus will be reduced to approximately 1,963,000 SF spread out over 5 parcels.
- B. Access to the site will be provided via three intersections on Old Neighborhood Road, five intersections on Enterprise Drive, and two intersections on Boices Lane. Five (5) of the intersections are proposed as public streets. The remaining access points will be low volume or turn restricted driveways. It is noted that the existing ceremonial drop-off loop for one-way entering and exiting traffic located in front of Parcel B on Enterprise Drive will remain open.
- C. Accounting for pass-by and multi-use trips, the *Tech City Office Park* will generate a total of 1,758 new vehicle trips during the PM peak hour with 456 trips entering and 1,302 trips exiting.
- D. The level of service analysis indicates that the study area intersections will operate adequately with the improvements summarized on Figures 4.1 through 4.3after full build-out of the *Tech City Office Park* development. The recommendations and findings for each intersection is cited below:
  - Enterprise Driveway/US Route 209/NY Route 199 WB Ramps No improvements recommended.
  - 2) Enterprise Driveway/US Route 209/NY Route 199 EB Ramps No improvements recommended.
  - 3) Enterprise Drive/North Driveway Remove existing bagged traffic signal. Convert intersection to a right-in/right-out only driveway and install a stop-sign on the westbound approach. Southbound left-turn vehicles will be served by the adjacent intersection to the south via a modified jug-handle that utilizes the adjacent parallel road for US Route 209 traffic.
  - 4) Enterprise Drive/US Route 209 EB Off Ramp/Middle Driveway This intersection should operate under traffic signal control. The southbound left-turns into the site will utilize a modified jug handle to access the parallel road and cross Enterprise Drive. The eastbound yield controlled



- right-turn lane should be reconstructed to utilize the traffic signal at the Middle Driveway so drivers do not have to look back over their shoulders to merge into southbound traffic on Enterprise Drive and the westbound Middle Driveway approach should provide separate left and right turn lanes.
- 5/6) Enterprise Drive/North & South Loop Driveways Construct exclusive northbound and southbound left-turn lanes on Enterprise Drive to remove all left-turning traffic from the through lanes.
- 7) Enterprise Drive/West Campus Driveway/South Driveway The South Driveway and Boices Lane/Mountain View Court intersections on Enterprise Drive should operate under a coordinated signal system to ensure that the southbound queue on Enterprise Drive does not block side street traffic from entering and exiting the development. An exclusive left-turn lane and a shared through/right-turn lane should be provided on the westbound South Driveway approach.
- 8) Enterprise Drive/Boices Lane/Mountain View Court The South Driveway and Boices Lane/Mountain View Court intersections on Enterprise Drive should operate under a coordinated signal system to ensure that the southbound queue on Enterprise Drive does not block side street traffic from entering and exiting the development.
- 9) Boices Lane/Middle Driveway/Dalewood Street The existing site driveway on Boices Lane located between Elmwood Street and Locust Street should be shifted to the west opposite Dalewood Street which is the approximate midpoint between Enterprise Drive and Morton Boulevard. A traffic signal should be installed. Note the westerly most minor site driveway on Boices Lane shown on the original concept plan should be eliminated.
- 10) Boices Lane/Morton Boulevard/East Driveway The existing northbound Morton Boulevard approach should be re-stripped to provide an exclusive left-turn lane and a shared through/right-turn lane. A second eastbound through lane should be constructed on Boices Lane and extended to the John Clark Drive/Driveway intersection with asymmetrical widening to the north. ROW will be needed along the project frontage to complete the widening. Eastbound left-turns should be restricted into the site. NYSDOT currently has a \$410,000 grade crossing improvement project scheduled for 2010 which will upgrade circuits, gates, and flashers at this location. Based on discussions with the NYSDOT, the project should explore the possibility of widening the Boices Lane crossing to 4-lanes with pedestrian crossing accommodations within the railroad ROW. Mitigation for the proposed development would be completed along Boices Lane but outside the railroad ROW. The existing traffic signal should be coordinated with the Boices Lane/John Clark Drive/Plaza Driveway intersection.
- 11) Boices Lane/John Clark Drive/Plaza Driveway The eastbound approach should be re-stripped to provide a shared left-turn/through lane and a shared through/right-turn lane in order to line up with the proposed

improvements at the Morton Boulevard/East Driveway intersection. This intersection should also be coordinated with the Boices Lane/Morton Boulevard/East Driveway intersection.

Any improvements at the Boices Lane/Morton Boulevard/East Driveway intersection or the Boices Lane John Clark Drive/Plaza Driveway intersection shall be coordinated with the NYSDOT to insure that adequate pre-emption is maintained with the CSX rail crossing.

- E. A threshold sensitivity analysis conducted at the Boices Lane/Morton Boulevard/East Driveway intersection and at the Boices Lane/John Clark Drive/Plaza Driveway intersection indicates these study area intersections will operate at the same levels of service with up to 25 percent of the proposed project with no improvements and will continue to operate adequately with the development of up to 50 percent of the proposed project with signal timing improvements. It is recommended that the signals be monitored and optimized after occupancy of 25 percent of the proposed project and that they continue to be monitored annually and/or coinciding with the development phases of the *Tech City Office Park* to ensure that the proposed signal timing improvements will maintain adequate traffic operations prior to the construction of the proposed geometric improvements.
- F. A roundabout intersection evaluation conducted at six of the existing study area intersection indicates that these intersections will operate at adequate levels of service after the construction of the proposed development. This analysis indicates that the proposed development would not preclude a roundabout alternative if it were progressed as part of a potential public project along Enterprise Drive and Boices Lane. However, there will be impacts to ROW with the construction of a roundabout at several of the proposed intersections. In addition, the spacing between the two roundabouts located at the West Campus Driveway/South Driveway and Boices Lane/Mountain View Court intersections could be problematic and will require more detailed analysis. Traffic signals are recommended as mitigation for the project.
- G. A qualitative evaluation was conducted to determine if the proposed development will generate more trips on Boices Lane approaching Route 9W as compared to the *Frank Sottile EIS*. The screen-line analysis indicates that there are similar volumes on Boices Lane during the Build 2014 design year and the 2028 *Frank Sottile EIS* design year. Therefore, the conclusions found in the *Frank Sottile EIS* will not change in the short term since the original Route 9W corridor analysis evaluated a similar number of trips generated by the re-development of this parcel. The evaluation also indicates that continued background growth will cause the Build 2029 traffic volumes to exceed the 2028 *Frank Sottile EIS* traffic volume threshold. Therefore, it is recommended that traffic volumes and queuing on Boices Lane be monitored to determine the need for a force-off loop detector

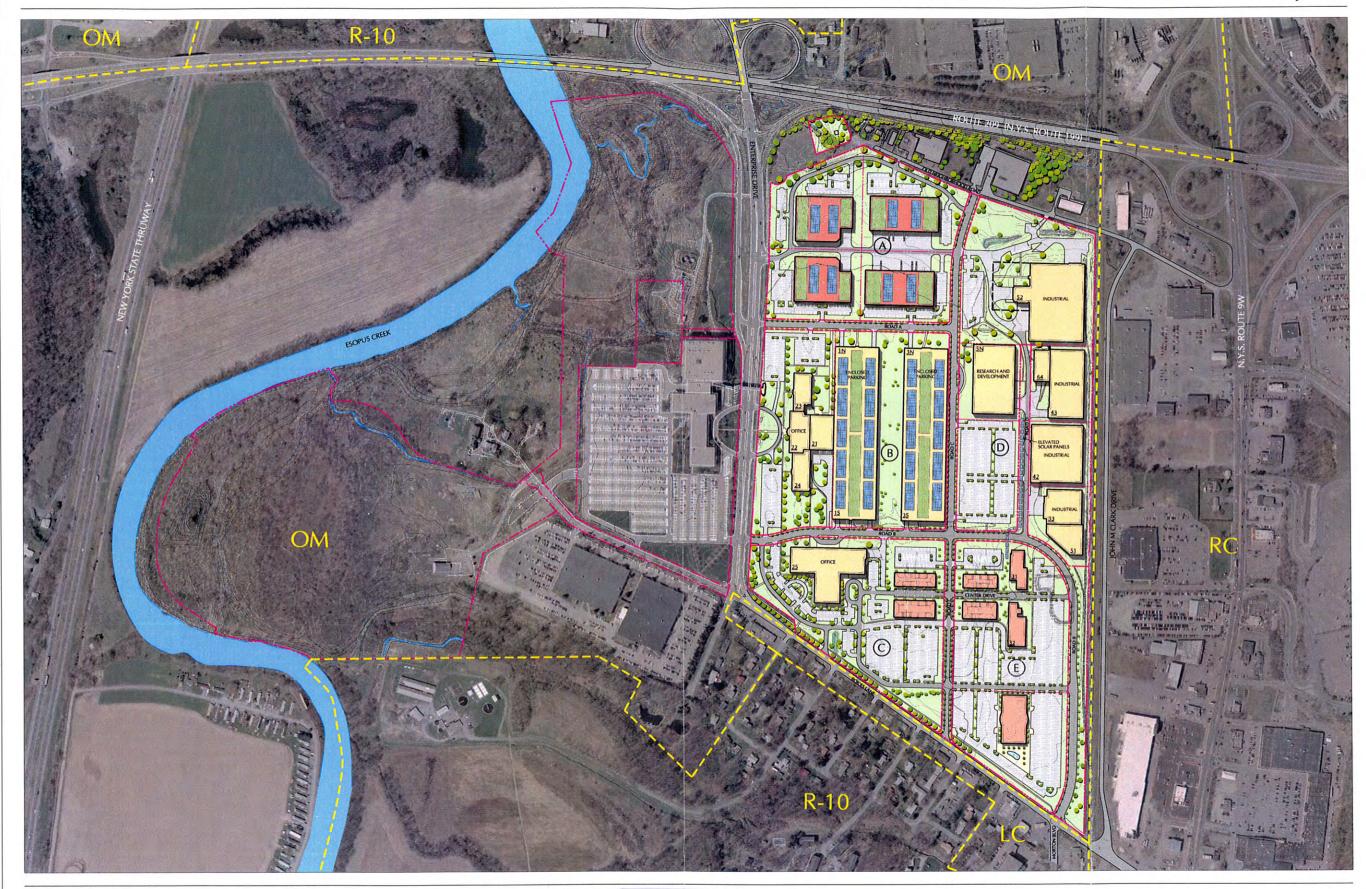
on the eastbound Boices Lane approach of the Route 9W intersection to insure traffic does not back-up to the rail crossing.

The potential traffic impacts of the proposed mixed use development will be mitigated with implementation of the recommended improvements.

## **Appendix A – Conceptual Site Plan**

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

# TECH CITY- TOWN OF ULSTER, NY





Note: This plan pre-dates the Traffic Study and does not necessarily reflect the access recommendations found in the report.

CAMPUS MASTER PLAN

JANUARY 27, 2009

## **Appendix B – Raw Turing Movement**

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York



Project: 09-024d Counted By: MDN Location: Ulster, NY Other:

File Name: tm09024p1 Site Code : 09-024-1 Start Date : 4/23/2009 Page No : 1

Groups Printed- Pass Veh - Heavy Veh - School Bus

		Enterprise Drive Southbound			RT 209 EB Off Ramp Westbound					Orive nd	RT 209 Ra Eastl		
Start Time	Left ,	Thru	App. Total	Left	Thru	Right	Aop. Total	Thru	Right	App. Total		App. Total	Int. Total
Factor	1.0	1.0		1.0	1.0	1.0		1.0	1.0		1.0 13		
04:00 PM		60	89	0	0	0	0	108	86	194	13	13	296
04:15 PM	23	46	69	0	0	0	0	114	78	192	14	14	275
04:30 PM	23	48	71 :	0	0	0	0	122	106	228	15	15	314
04:45 PM	12	53	65	0	$\frac{0}{0}$ .	$\cdot \frac{0}{0}$	0	103	109	212	18	18	295
Total	87	207	294	0	0	0	0	447	379	826	60	60	1180
05:00 PM	35	94	129	0	0	0	0	104	108	212	14	14	355
05:15 PM	15	60	75	0	0	0	0	82	90	172	6	6	253
05:30 PM	36	60	96	0	0	0	0	89	84	172	11	11	280
05:45 PM	20	82	102		-		0	71	69	140		, .	
Total	106	296	402	0	<u> </u>	0	· · · · · · · · · · · · · · · · · · ·	346	351	697	40	. <u>9</u> 40	251
ioiai	100	290	402	U	U	U	0	346	301	697	40	40	1139
Grand Total	193	503	696 :	0	0	0	0	793	730	1523	100	100	2319
Apprch %	27.7	72.3		0	0	0		52.1	47.9		100	ł	
Total %	8.3	21.7	30 أ	0	0	0	0	34.2	31.5	65.7	4.3	4.3	
Pass Veh	190	501	691	0	0	0	O T	788	724	1512	99	99	2302
% Pass Veh	98.4	99.6	99.3	0	0	0	0	99.4	99.2	99.3	99	99	99.3
Heavy Veh	3	1	4		0	0	0,	2	6	8	1	<u> </u>	13
% Heavy Veh	1.6	0.2	0.6	.0	0	0	0 }	0.3	0.8	0.5	1	1	0.6
School Bus	0	1	1	0	Ō	0	0 ;	3	0	3	0	Ö	4
% School Bus !	0	0.2	0.1	0	0	0	0 !	0.4	0	0.2	0	0,	0.2

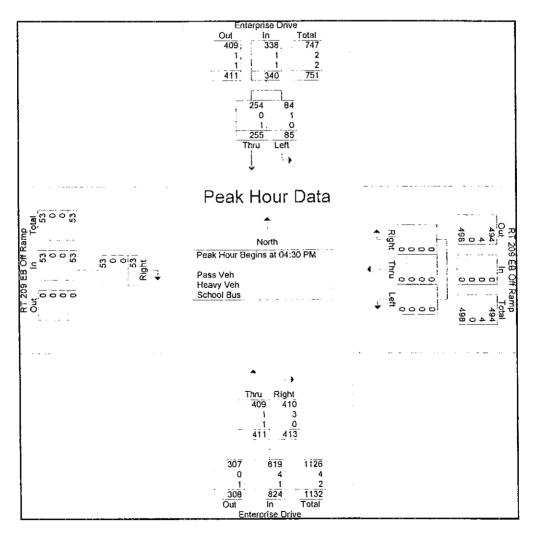


Project: 09-024d Counted By: MDN Location: Ulster, NY

Other:

File Name : tm09024p1 Site Code : 09-024-1 Start Date : 4/23/2009 Page No : 2

*		erprise C outhbou		RT	209 EB Westl	Off Ran	np		erprise I orthbou		Ra	EB Off Imp bound	
Start Time	Left		App. Total	Left	Thru		App. Total	Thru	Right	App. Total	Right	App. Total	Int. Total
Peak Hour Analysi					eak 1 of	1							
Peak Hour for Enti			gins at 4:30	:00 PM									
4:30:00 PM	23	48	71 .	0	0	0	0 [	122	106	228	15	15	314
4:45:00 PM	12	53	<b>65</b> ,	0	0	0	0	103	109	212	18	18	295
5:00:00 PM	35	94	129	0	0	0	0	104	108	212	14	14	355
5:15:00 PM	15	60	75	0	0	0	0 ,	82	90	172 :	6	6	253
Total Volume	85	255	340 .	Ō	0	Ö	0 -	411	413	824	53	53 ;	1217
% App. Total	25	75		0	0	0	·	49.9	50.1		100	i	
PHF	.607	.678	.659	.000	.000	.000	.000	842	.947	904	.736	.736	.857
Pass Veh	84	254	338	0	0	0	0	409	410	819	53	53	1210
% Pass Veh	98.8	99.6	99.4	0	0	0	0	99.5	99.3	99.4	100	100	99.4
Heavy Veh !	1	0	1	0	0	0	0	1	3	4	0	0	5
% Heavy Veh ;	1.2	0	0.3	0	0	0	0	0.2	0.7	0.5	0	0 ;	0.4
School Bus	0	1	1	0	0	0	0 .	1	0	1	0	0	2
% School Bus	0	0.4	0.3	0	0	0	0	0.2	0	0.1	0	0	0.2





Project: 09-024d Counted By: DPR Location: Ulster, NY Other: File Name : tm9024p2 Site Code : 09-024-2 Start Date : 4/23/2009

Page No :1

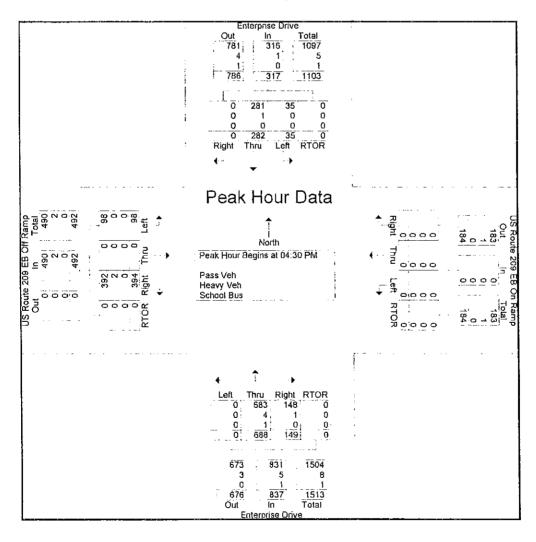
											/eh - Heavy Veh - School Bus										
		Enter	rprise	Drivo		Ų		ıte 209		On i		Ente	rprise	Drive		Ų:		ite 20		Off	
			uthbo					Ramp		:			rthbo		•			Ramp			
				ultu	-		We	estbou	ind								Ea	istbou	ınd		
Start Time	Lert	Thru	Right	RTOR	≙pp. Total	Left	Thru		RTOR	Ago, Total	Left		Right	RTOR	Aco. Total	Left	Thru	Right	RTOR	App. Total	int Total
Factor	1.0	<u>1.0</u>	1.0	1.0		1.0	.1.0.	1.0	1.0	‡	1.0	1.0	1.0	1.0	5-25	1.0	1.0	1.0	1.0		
04:00 PM	10	69	0	0	79	0	0	0	0	0 1	0	168	13	0	181	27	1	88	0	116	376
04:15 PM	7	43	0	0	50	0	0	0	0	0 [	0	158	10	0	168	21	0	87	0	108	326
04:30 PM	10	67	0	0	77	0	0	0	Ü	0	0	183	75	0	258	22	0	78	0	100	435
04:45 PM	- 2	64	$\frac{0}{0}$ .	0	66	0	. 0	. 0		0	0	183	36 134	<u>0</u>	219	25 95	0/4	114	0	139	424
Total	29	243	U	U	272	0	0	0	0	0 [	0	692	134	U	826	95	ŧ	367	U	463	1561
05:00 PM	12	76	0	0	88	0	0	0	0	0 :	0	182	25	0	207	26	0	120	0	146	441
05:00 PM	11	75	0	0	86	0	0	0	۸	0	0	140	13	0	153	25	Ô	82	0	107	346
05:30 PM	6	64	0	0	70	0	0	0	0	0	0	132	14	0	146	23	1	73	0	97	313
05:45 PM	4	80		_	84	_	_	ő	ŏ	ŏ	ő	129	8	0	137	17	'n	75	-	92	313
Total	33	295	<u>0</u> .	0 0	328	0	0	·- <del>ŏ</del>	0	0		583	60		643	91	· <u>ĭ</u>	350	0	442	
· Otal ;	, 00	200	Ū	·	OLO		·	Ŭ	•	Ο,	Ū			·	0.0	٠.		-	ŭ	. ,_	
Grand Total	62	538	0	0	600	. 0	0	0	0	0;	0	1275	194	0	1469	186	2	717	0	905	2974
Approh %	10.3	89.7	0	0		0	0	0	0	į	0	86.8	13.2	0		20.6	0.2	79.2	0		
Total %	2.1	18.1	0	0	20.2	0	<u>0</u>	0	0	0	0	42.9	6.5	Q	49.4	6.3	0.1	24.1	0	30.4	
Pass Veh	62	537	·· <u>-</u>	Ö	599	0	Ö	ō	0	0	0	1267	193	0	1460	185	2	703	0	890	2949
% Pass Veh	100	99.8	0	0	99.8	00	0	0	_0	0 !	0	99.4	99.5	0_	99.4	99.5	100	98	0	98.3	99.2
Heavy Veh	0	1	0	0	1		0	0	0	0	0	7	1	0	8	0	0	8	0	8	17
% Heavy Veh	0	0.2	0	<u>0</u>	0.2	0	0	0_	0	0	0	0.5	0.5	0	0.5	0	<u>0</u> .	1.1	<u>0</u>	0.9	0.6
School Bus	0	0	0	0	0	0	0	0	0	0	0	_ 1	0	0	1	1	0	6	0	7	8
% School Bus	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.5	0	0.8	0	8.0	0.3



Project: 09-024d Counted By: DPR Location: Ulster, NY Other:

File Name: tm9024p2 Site Code: 09-024-2 Start Date : 4/23/2009 Page No : 2

			rprise uthbo	Drive und		Ū		ute 20 Ramp estbo		On			rprise rthbo	Drive und		Ü		ite 20 Rami istboi		Off ····	
Start Time						Left ·			RTOR	spo. Total	Left	Thru	Right	RTOR .	App, Tezul	Left	Thru	Right	RTOR	Azp. Total	int. Totat
Peak Hour /	Analys	sis Fro	m 4:0	0:00 F	M to 5:	45:00	PM -	Peak	1 of 1												
Peak Hour f	or Ent	tire Int	ersect	tion Be	egins at	4:30:	00 PN	И													
4:30:00 PM	10	67	0	0	77	0	0	0	0	0	0	183	75	0	258	22	0	78	0	100	435
4:45:00 PM	2	64	0	0	66	0	0	0	0	0	0	183	36	0	219	25	0	114	0	139	424
5:00:00 PM	12	76	0	0	88	0	0	0	0	0	0	182	25	0	207	26	0	120	0	146	441
5:15:00 PM	11	75	0	0	86	0	0	0	0	0	0	140	13	0	153	25	0	82	0	107	346
Total Volume	35	282	0	0	317	0	0	0	0	Ő Î	Ö	688	149	Ō	837	98	Ō	394	0	492	1646
% App. Total	11	89	0	0		0	0	0	0		0	82.2	17.8	0		19.9	0	80.1	0		
PHF	.729	.928	.000	,000	.901	.000	.000	.000	.000	.000	.000	.940	.497	.000	.811	.942	.000	.821	.000	.842	.933
Pass Veh	35	281	0	Ő	316	0	Ö	0	0	0	0	683	148	0	831	98	0	392	0	490	1637
% Pass Veh	100	99.6	0	0	99.7	0	0	0	0	0	0	99.3	99.3	0	99.3	100	0	99.5	0	99.6	99.5
Heavy Veh	0	1	0	0	1	0	0	0	0	0	0	4	1	0	5	0	0	2	0	2	8
% Heavy Veh	0	0.4	0	0	0.3	0	0	0	0	0	0	0.6	0.7	0	0.6	0	0	0.5	0	0.4	0.5
School Bus	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% School Bus	0	0	0	0	0 :	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1



			venicie
	Acres 1	# of vehicles	
time	# of vehicles	# of vehicles	# of vehicles
	LEFT IN	RIGHT IN	
4:00			<i>'</i>
05			
10	·		
15		]	
7.0			
25			
30	T		
35			
40			
75			
50			
55			
5:00			
05		T	
/0			
15			
20			
25			
30			
35			
1/8			
42			
\$10			
55			
			<u>ļ.</u>
			ļ
		<u> </u>	
			<u> </u>
			<u> </u>
			<u> </u>
			1
		<u> </u>	
			ļ
			<u> </u>
			<del> </del>
1	1	-	

ements			
	4		
time	# of venicles	# of venicles	# of venicles
	LEFT OUT	RIGHT OUT	# of vehicles
4:00			
05			
/*			
15	Į.		
Zo	<u>'</u>	1	
2.5	$\mathcal{T}$	T	
36	1	TT	
35		١	
40			
45			
50			
55		l '	
5:00			
05		·	
10	1	<del>                                     </del>	
15	1	111	
20		711	
25	ļ	<del> </del> -	
30		<u> </u>	-
35		1	
lL		-	
40		7	ļ
50	ļ	<del> </del>	ļ
<u> </u>	<u> </u>	<u> </u>	
55			
ļ <u></u>			ļ
ļ			
			1
			<del>                                     </del>
ļ	<del> </del>		
1			†
	-		†
	1		<del> </del>
<b> </b>		<del> </del>	+
<b> </b>	<del> </del>		
	<del> </del>	1	<del>                                     </del>
L	<u> </u>	<u> </u>	<u></u>







Project: 09-024d Counted By: DPR Location: Ulster, NY Other:

File Name : tm09024p7 Site Code : 09-024-7 Start Date : 5/6/2009 Page No : 1

Groups Printed- Pass Veh - Heavy Veh - School Bus

	En	C	se Dri off Rar uthbo	np	209	Te	Tech City Driveway # 2 Westbound					Enterprise Drive Northbound					Route 209 Off Ramp Eastbound				
Start Time	Left	Thru	Right	Rt 299 Off	App. Total	Left	Thru	Right	ятоя :	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Righl	RTOR	Acqu. Total	tot. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	50	0	73	123	1	0	0	0	1	0	147	1	0	148	0	1	0	- 110		273
04:15 PM	Õ	38	ō	73	111	i	ō	1	ŏ	2	Ö	155	0	Ō	155	2	Ö	Ō	Ō	2	270
04:30 PM	Ö	46	Ó	69	115	0	Ō	0	0	0	0	249	0	0	249	0	1	1	0	2	366
04:45 PM	0	51	0	88	139	0	0	2	0	2	0	178	0	0	178	0	0	0	0	0 ;	319
Total	0	185	0	303	488	2	0	3	0	5	0	729	1	0	730	2	2	1	0	5	1228
05:00 PM	0	78	0	81	159	0	0	0	0	0	0	174	0	0	174	1	0	0	0	1	334
05:15 PM	0	73	0	85	158	2	0	0	0	2	. 0	148	0	0	148	0	0	0	0	0	308
05:30 PM	0	74	0	67	141	0	0	0	0	0	: 0	130	0	0	130	1	1	0	0	2	273
05:45 PM	<u> </u>	62	0	93	156	0	0_	0_	0	0	0	125	0	<u> </u>	125	0	0	0	0_	0	281
Total	1	287	0	326	614	2	0	0	0	2	0	577	0	0	577	2	1	0	0	3	1196
Grand Total	1	472	0	629	1102	4	0	3	0	7	0	1306	1	0	1307	4	3	1	0	8	2424
Apprch %	0.1	42.8	0	57.1		57.1	0	42.9	0		0	99.9	0.1	0		50	37.5	12.5	0		
Total %	0	19.5	0	25.9	45.5	0.2	0	0.1	0	0.3	0	53.9	0	0	53.9	0.2	0.1	0	0	0.3	
Pass Veh	1	465	0	615	1081	. 3	0	3	0	6	0	1296	1	0	1297	1	1	1	0	3	
% Pass Veh	100	98.5	0	97.8	98.1	. 75	0	100	0	85.7	0	99.2	100	0	99.2	25	33.3	100	0	37.5	98.5
Heavy Veh	0	5	0	9	14	: 1	0	0	0	1 :	. 0	8	0	0	8	_3	2	0	0	5	28
% Heavy Veh	0	1.1	0	1.4	1.3	25	0	0	0_	14.3	0	0.6	0	0	0.6	75	66.7	0	_ 0	62.5	1.2
School Bus	. 0	2	Ŏ	5	7		0	0	0	0	, 0	2	0	0	2	0	0	0	0	0	-
% School Bus	0	0.4	0	8.0	0.6	0	0	0	0	0	. 0	0.2	0	0	0.2	: 0	0	0	0	0	0.4



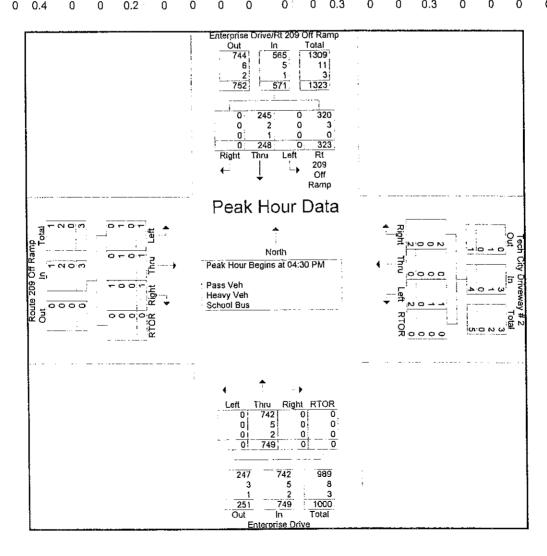
Project: 09-024d Counted By: DPR Location: Ulster, NY

Other:

File Name: tm09024p7 Site Code: 09-024-7 Start Date: 5/6/2009

Page No : 2

	Ent	Ò	se Dri ff Rar uthbo	np	209	Ted		y Driv	eway	# 2			rprise rthbo		· · · · · · · · · · · · · · · · · · ·	R		209 O	ff Rar	np	·-·· · ·
Start Time	Left	Thru	Right	GII	App, Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour A	Analys	is Fro	m 4:0	0:00 F	M to 5:	45:00	PM-	Peak	1 of 1						****	****					
Peak Hour f	or En	ire Int	ersec	tion B	egins a	t 4:30:	00 PN	A .													
4:30:00 PM	0	46	0	69	115	0	0	0	0	0	0	249	0	0	249	0	1	1	0	2	366
4:45:00 PM	0	51	0	88	139	0	0	2	0	2	0	178	0	0	178	0	0	0	0	0	319
5:00:00 PM	0	78	0	81	159	0	0	0	0	0	0	174	0	0	174	1	0	0	0	1.	334
5:15:00 PM	0	73	0	85	158	2	0	0	0	2 ;	0	148	0	0	148	0	0	0	0	0	308
Total Volume	0	248	0	323	571	2	0	2	0	4 :	0	749	0	0	749	1	1	1	0	3 :	1327
% App. Total 1	0	43.4	0	56.6		50	0	50	0		0	100	0_	0		33.3	33.3	33.3	0		
PHF	.000	.795	.000	.918	.898	.250	.000	.250	.000	.500	.000	.752	.000	.000	.752	.250	.250	.250	.000	.375	.906
Pass Veh	0	245	0	320	<b>56</b> 5	1	0	2	0	3 .	0	742	0	0	742	0	0	1	0	1 !	1311
% Pass Veh	0	98.8	0	99.1	98.9	50.0	0	100	0	75.0 .	0	99.1	0	0	99.1	. 0	0	100	.0	33.3	98.8
Heavy Veh	0	2	0	3	5	1	0	0	0	1 .	0	5	0	0	5	. 1	1	0	0	2	13
% Heavy Veh	0	0.8	0	0.9	0.9	50.0	0	0	0	25.0	0	0.7	0	0	0.7	100	100	0	0	66.7	1.0
School Bus	0	1	0	0	1	. 0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% School Bus	0	0.4	0	0	0.2	. 0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.2



(NORTH COOD DAWY)

Vehicle Turn Movements

DPR 5/6/09

			<u>Vehicle</u>
time	# of vobiolog	# of vehicles	# of vobiolog
time	# OF VEHICLES	DICLT IN	# Of Verticles
ll'a0	LEFTIN	MIGHT IN	
4:00 05			
16	 		
15	<u> </u>		
7.0	<u> </u>	<u> </u>	
15	<u> </u>	<u> </u>	
76			
36 35 40			
40			
45			
50			
50 55			t
5:00			
05			
10			
15			
Įo			
25			
30			
35			<u> </u>
40			ļ
45			<u> </u>
50			
5.5			<u> </u>
			<del>                                     </del>
			<u> </u>
		-	
<u></u>			
<u> </u>			<del></del>
ļ			ļ
<u> </u>	<del> </del>	<del></del>	
		+	<del> </del>
ļ			
<b></b>		<del>                                     </del>	_
<b> </b>		<del>                                     </del>	<del>-</del>
<b> </b>		+	
		<b></b>	·- <del> </del> ·
<u> </u>		<del>                                     </del>	
		<del></del>	<del>                                     </del>
ļ			
[	<u></u>		

ments		<del> </del>	
	4		
time `	201		# of vehicles
	LEFT OUT	RIGHT OUT	
4:00			
05			
10			
15			
15 20			
25			
30		V	
35			
40	1		
45	1		
50	<del>  -                                   </del>		
55			
5:00			1
05	<del> </del>	1	
10			
10 15	<del> </del>	1	
20		<del>                                     </del>	
25			
30	1		
35		1	
40		<b>†</b>	
45		1	
45 50	<del></del>		
55		1	1
,			
<del></del>			
	-t		
	1		
	<del>- </del>		<u> </u>
	4		
		1	
	1	1	
		1	





(NORTH LOOP DRUY)

DPR 5/6/09

			Vertion
	4		
time	# of vehicles	# of vehicles	# of vehicles
tii 110	I FET IN	BIGHT IN	01 101 100
4:00	takat ( II )	the think	
4:00 05			
1/2			
10 15			
20			
10			<del> </del>
		<u> </u>	
25 30 35			
40	I Å	<u> </u>	
1/5			1
<u> 72</u>			<del>                                     </del>
50 55			
5:00		<del> </del>	<del> </del>
7200			
05 10		<del> </del>	
15		<del> </del>	<del> </del>
20	<b>1</b>	<del>                                     </del>	
25	<b></b>		
<i>3</i> 6			
<u> </u>		<b> </b>	
35 40 45		<del> </del>	
45			
50		1	
<u> </u>		11	
		1	
	1		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			

ments			/ /
4:			<i>(</i> (
time	# OF VERICIES	# or venicles	# of vehicles
	LETI UUI	RIGHT UUT	
41:00			
<u> 05</u>			
10			
15			
20 25	<del> </del>		
30			
35 170			
40 45		<del> </del>	
27.7 E 18			
50 55			
5.100		ļ	
<u> </u>	<u> </u>	<del> </del>	
10	<del>                                     </del>	<del> </del>	<u> </u>
10 15		<del>                                     </del>	<del>                                     </del>
20			<del> </del>
25			
30			
35	1		
40			
#5			
50			
55			
	<u> </u>		
<u> </u>			
<u> </u>			4





bourt LOOP DAWY)

DPR ベスハミ

14

			venicie
	4		
time	# of vehicles	# of vehicles	# of vehicles
	LEFTIN	RIGHT IN	
4.00	The state of the s		
<i>0</i> 5			
10 15			
15			
20			
25			<u> </u>
			<u> </u>
<u>35</u>	<u> </u>		
<u>40</u>	<del></del>	<u> </u>	
45		<u> </u>	
50 55			
<u> </u>			<del> </del>
05	<u> </u>		
10			
15	1		
<i>7</i> 6			
25			
30		ļ	
35		<u> </u>	
40		-	-
45			
5/5		<u> </u>	
55	<del> </del>	<del> </del>	
		<del> </del>	
	1		<del>-</del>
		<del></del>	
<u> </u>		1	
<b> </b>			<del>- </del>
ļ		<del></del>	
<b> </b>			<del></del>
17	7		

ments			1
			# of vehicles
time	# Of Venicles	# Of Venicles	# of Venicles
	LEFICUL	RIGHT OUT	ļ
4.00			
05			
16			
15			
<i>20</i> 25			
30 30	<u> </u>		
35 35			<del>                                     </del>
1/0			<u> </u>
45			
50	<del> </del>		
<i>50</i> 55		***************************************	
5100			
51/10 05			
10			
15			
20	<u> </u>		
25			
30		:	
35	ļ	ļ	
40	<u> </u>	<u> </u>	
45 50			<b>-</b>
55		<u> </u>	
<u> </u>	<u> </u>	<del>- </del>	1
ļ			
		<del>                                     </del>	
	1	<u> </u>	
		_	_
<b> </b>			
<u> </u>	<del> </del>	-	
	_		
11			(



(SOUTH COST PRINY)

DPR 5/4/37

			Verificie
	4	# of vehicles RIGHT IN	
time	# of vehicles	# of vehicles	# of vehicles
	LEFTIN	RIGHT IN	
4.6a			
04			
10 15		<u> </u>	
10			<u> </u>
15			<del>  </del>
<del>30</del> 35			
46			
45	<u> </u>		
50			
55			
5:00			
05	<b></b>	1	
10 15			
20	<del>                                     </del>	<del> </del>	<del> </del>
75	· · · · · · · · · · · · · · · · · · ·		
30			
35			
40			<u> </u>
45 50	<u> </u>		
50			
55	<del></del>		<del> </del>
<del></del>	<u> </u>		<del>                                     </del>
<b> </b>	<u> </u>		<u> </u>
<u> </u>			
		-	
	-		
	1		
	<del>                                     </del>		
<b> </b>			
11	I	1	1

ments			· · · · · · · · · · · · · · · · · · ·
	4		# of vehicles
time	# of vehicles	# of vehicles	# of vehicles
	LEFT OUT	RIGHT OUT	
4:00			
05			
10 15			
ZQ			
25			
30			
35			
40	1		
45			
50	ļ	<u> </u>	<u> </u>
55	ļ	ļ	
5:00 05	-	<del> </del>	
(/S			<del>                                     </del>
10 15	<u> </u>		<del> </del>
20	<del>                                     </del>	<del> </del>	<del> </del>
25			
30			
55			
40			
45		<u> </u>	
50	-		
55	<u> </u>		<u> </u>
<u> </u>	<u> </u>	<del>- </del>	
<b> </b>	-		
		<del>- </del>	
<u> </u>	<del></del>		
			-
<b></b>			
<b> </b>	<del></del>		
<b> </b>	-		
· · · · · · · · · · · · · · · · · · ·			
<b> </b>			





Project: 09-024d Counted By: DDD Location: Ulster, NY

Other:

File Name : tm09024p6 Site Code : 09-024-6 Start Date : 5/6/2009 Page No : 1

Groups Printed- Pass Veh - Heavy Veh - School Bus
Tech City Driveway 5
Enterorise Drive
Tech City Driveway 5

		Ente	rprise	Drive	<del>)</del>	Τe	ech C	ity Dri	ivewa	y 5		Ente	rprise	Drive	)	. Te	ech C	ity Dr	ivewa	y 5	
		So	uthbo	und			W	estbo	und			No	rthbo	und			Ea	istbo	ınd		
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	atoa	App. Total	Left	Thru	Right	RTOR	App, Total	Left	Thru	Right	RTOR	App. Total	int. Fotal
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	فرست د دست	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	123	2	1	126	2	2	2	0	6 ·	0	124	1	0	125	16	0	5	5	26	283
04:15 PM	2	108	3	0	113	1	0	1	0	2	0	166	4	0	170	9	1	5	2	17	302
04:30 PM	1	105	2	0	108	12	0	12	1	25	0	199	4	0	203	24	0	9	3	36	372
04:45 PM	1	138	4	2	145	5	0	3	2	10	0	172	1	0	173	7	1	_2	2	12 :	340
Total	4	474	11	3	492	20	2	18	3	43	0	661	10	0	671	56	2	21	12	91	1297
05:00 PM	2	143	4	0	149	1	0	1	0	2	0	185	1	0	186	4	0	4	2	10	347
05:15 PM	0	165	1	0	166	1	0	1	0	2	0	142	3	0	145	, 2	0	1	0	3	316
05:30 PM	1	145	0	0	146	7	0	2	0	9	0	118	2	0	120	3	0	3	0	6	281
05:45 PM	1	143	1	0	145	4	0	1	0	5	0	117	0	0	117	. 3	0	0	0	3	270
Total	4	596	6	0	606	13	0	5	0	18	0	562	6	0	568	12	0	8	2	22	1214
Grand Total	8	1070	17	3	1098	33	2	23	3	61	0	1223	16	0	1239	68	2	29	14	113	2511
Apprch %	0.7	97.4	1.5	0.3		54.1	3.3	37.7	4.9		0	98.7	1.3	0		60.2	1.8	25.7	12.4		
Total %	0.3	42.6	0.7	0.1	43.7	1.3	0.1	0.9	0.1	2.4	0	48.7	0.6	0	49.3	2.7	0.1	1.2	0.6	4.5	
Pass Veh	8	1048	17	3	1076	33	2	23	3	61	0	1210	16	0	1226	67	1	29	13	110	2473
% Pass Veh	100	97.9	100	100	98	100	100	100	100	100	. 0	98.9	100	0	99	98.5	50	100	92.9	97.3	98.5
Heavy Veh	0	15	0	0	15	0	0	0	0	0	0	10	0	0	10	1	1	0	1	3	28
% Heavy Veh	0	1.4	0	0	1.4	. 0	0	0	0	0 .	. 0	0.8	0	0	8.0	1.5	50	0	7.1	2.7	1.1
School Bus	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	10
% School Bus	0	0.7	0	0	0.6	0	0	0	0	0	0	0.2	0	0	0.2	. 0	0	0	0	0	0.4

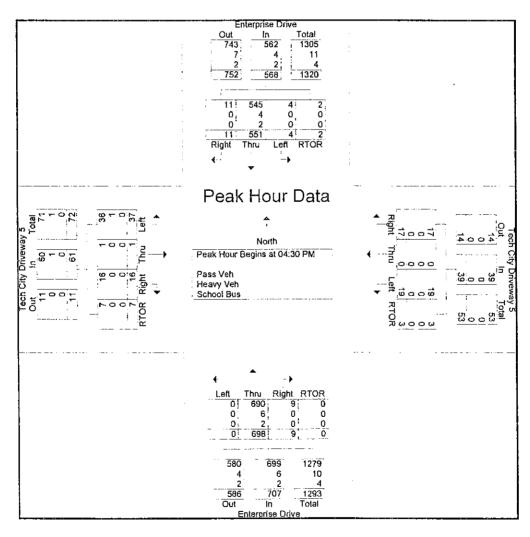


Project: 09-024d Counted By: DDD Location: Ulster, NY

Other:

File Name: tm09024p6 Site Code : 09-024-6 Start Date : 5/6/2009 Page No : 2

			rprise uthbo	Drive und		Te		ity Dr estbo	ivewa und	y 5			rprise	Drive und		T		ity Dr		y 5	į
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	Aso, Total	Left	Thru	Right	ATOR	App Total	int. Total
Peak Hour /	Analys	is Fro	m 4:0	0:00 P	M to 5:	45:00	PM -	Peak	1 of 1												
Peak Hour f	for Ent	tire Int	ersec	tion Be	egins a	4:30:	00 PN	1													
4:30:00 PM	1	105	2	0	108	12	0	12	1	25	0	199	4	0	203	24	0	9	3	36	372
4:45:00 PM	1	138	4	2	145	5	0	3	2	10	0	172	1	0	173	7	1	2	2	12	340
5:00:00 PM	2	143	4	0	149	1	0	1	0	2	0	185	1	0	186	4	0	4	2	10	347
5:15:00 PM	0	165	1	0	166	1	0	1	0	2	0	142	3	0	145	. 2	0	1	0	3	316
Total Volume	4	551	11	2	568	19	0	17	3	39	0	698	9	0	707	37	1	16	7	61	1375
% App. Total	0.7	97	1.9	0.4		48.7	0	43.6	7.7		0	98.7	1.3	0		60.7	1.6	26.2	11.5		
PHF	.500	.835	.688	.250	.855	.396	.000	.354	.375	.390	.000	.877	.563	.000	.871	.385	.250	.444	.583	.424	.924
Pass Veh	4	545	11	2	562	19	0	17	3	39	0	690	9	0	699	36	1	16	7	60	1360
% Pass Veh	100	98.9	100	100	98.9	100	0	100	100	100	0	98.9	100	0	98.9	97.3	100	100	100	98.4	98.9
Heavy Veh	0	4	0	0	4	0	0	0	0	0	. 0	6	0	0	6	1	0	0	0	1	11
% Heavy Veh	0	0.7	0	0	0.7	0	0	0	0	0	. 0	0.9	0	0	0.8	2.7	0	0	0	1.6	0.8
School Bus	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% School Bus	0	0.4	0	0	0.4	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.3





Project: 09-024d Counted By: DDD Location: Ulster, NY Other:

File Name : tm09024p5 Site Code : 09-024-5 Start Date : 4/28/2009 Page No : 1

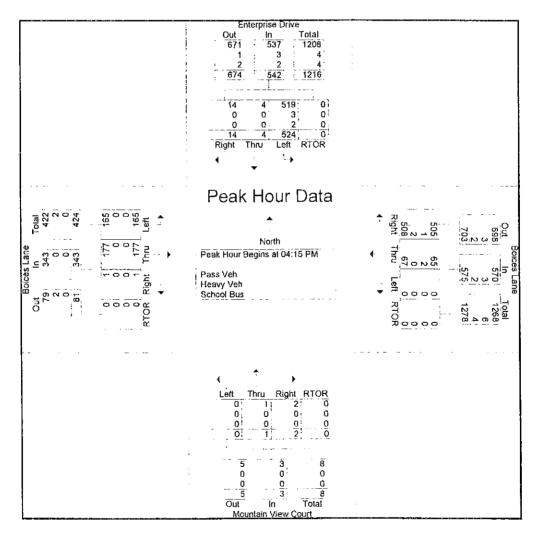
						Grou	ıps Pi	rinted	- Pass	Veh -	Heav	y Veh	- Sch	iool B	us						
		Enter	prise	Drive			Во	ces L	ane		M	ounta	in Vie	w Co	urt		Во	ices L	ane	;	
		So	ithbo	und			We	estbo	und	1		No	rthbo	und			Ea	istbor	ınd	:	
Start Time	Left	Thru	Right	RTCR	App. Total	Left	Thru	Right	RTOR	App. Year	Left	Thru	Right	RTOR	App Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	!	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	148	Ö	3	0	151	0	10	123	0	133	0	0	0	0	0	11	14	0	0	25	309
04:15 PM	108	1	5	0	114	0	14	129	0	143	0	0	0	0	0	22	22	0	0	44	301
04:30 PM	146	1	2	0	149	0	13	117	0	130 ;	0	1	0	0	1	76	84	0	0	160	440
04:45 PM	129	1	4	0	134	0	22	125	0	147	0	0	1	0	1	42	44	1	0	87 ;	369
Total	531	3	14	0	548	0	59	494	0	553	0	1	1	0	2	151	164	1	0	316	1419
05:00 PM	141	1	3	0	145	0	18	137	0	155	0	0	1	0	1	25	27	0	0	52	353
05:15 PM	110	2	6	0	118	0	5	120	0	125	0	0	0	0	0	17	16	0	0	33	276
05:30 PM	129	0	3	0	132	0	9	109	0	118.	0	0	0	0	0	22	12	0	0	34	284
05:45 PM	122	3	2	0	127	2	8	100	0	110	<u> </u>	4	<u>0</u> 1	. 0	$\frac{4}{5}$	10	9	1.	0	20	261
Total	502	6	14	0	522	2	40	466	0	508	0	4	1	0	5	74	64	1	0	139	1174
Grand Total	1033	9	28	0	1070	2	99	960	0	1061	0	5	2	0	7	225	228	2	0	455	2593
Apprch %	96.5	8.0	2.6	0		0.2	9.3	90.5	0		0	71.4	28.6	0		49.5	50.1	0.4	0		
Total %	39.8	0.3	1.1	0	41.3	0.1	3.8	37	0	40.9	0	0.2	0.1	0	0.3	8.7	8.8	0.1	0	17.5	
Pass Veh	1017	9	28	Ö	1054	2	95	957	0	1054	0	5	2	0	7	225	228	2	0	455	2570
% Pass Veh	98.5	100	100	0	98.5	100	96	99.7	0	99.3	0	100	100	0	100	100	100	100	0	100	99.1
Heavy Veh	11	0	0	0	11	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	16
% Heavy Veh	1.1	0	0	0	1	0	4	0.1	0	0.5	0	Ō	0	<u>0</u>	0	0	0	0	0	0	0.6
School Bus	5	0	0	0	5	0	0	2	0	2	0	0	0	0	0	Ó	Ö	Ö	0	0	7
% School Bus	0.5	0	0	0	0.5	0	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0.3



Project: 09-024d Counted By: DDD Location: Ulster, NY

File Name: tm09024p5 Site Code: 09-024-5 Start Date : 4/28/2009 Page No : 2

			rprise uthbo	Drive und				ices L					in Vie	w Co und	urt			ices L estbou			
Start Time	Left				App. Total					Acp. Total	Left	Thru	Right	RTOR	Аср. Том	Left	Thru	Right	RTOR :	App. Total	int Total
Peak Hour A	Analys	is Fro	m 4:0	0:00 P	M to 5:	45:00	PM -	Peak	1 of 1												
Peak Hour t	for Ent	tire Int	ersect	tion Be	egins a	t 4:15:	00 PN	/1													
4:15:00 PM	108	1	5	0	114	0	14	129	0	143	0	0	0	0	0	22	22	0	0	44 :	301
4:30:00 PM	146	1	2	0	149	0	13	117	0	130	0	1	0	0	1	76	84	0	0	160	440
4:45:00 PM	129	1	4	0	134	0	22	125	0	147	0	0	1	0	1	42	44	1	0	87	369
5:00:00 PM	141	1	3	0	145	. 0	18	137	0	155	0	0	1	0	1	25	27	0	0	52	353
Total Volume	524	4	14	Ō	542	Ö	67	508	0	575	0	1	2	Ö	3	165	177	1	Ö	343	1463
% App. Total	96.7	0.7	2.6	0		0	11.7	88.3	0		0	33.3	66.7	0		48.1	51.6	0.3	0		
PHF	.897	1.000	.700	.000	.909	.000	.761	.927	.000	.927	.000	.250	.500	.000	.750	.543	.527	.250	.000	.536	.831
Pass Veh	519	4	14	0	537	0	65	505	0	570	0	1	2	0	3	165	177	1	0	343	1453
% Pass Veh	99.0	100	100	0	99.1	0	97.0	99.4	0	99.1	0	100	100	0	100	100	100	100	0	100	99.3
Heavy Veh	3	0	0	0	3	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	6
% Heavy Veh	0.6	0	0	0	0.6	0	3.0	0.2	0	0.5	0	0	0	0	0	0	0	0	0	0	0.4
School Bus	2	0	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	4
% School Bus	0.4	0	0	0	0.4	0	0	0.4	0	0.3	0	0	0	0	0	0	0	0	0	0	0.3





Project: 09-024d Counted By: DAT Location: Ulster, NY Other:

% School Bus

0.2

0.1

0.2

0.1

0 0.3

0.9

0.5

0.3

File Name: tm09024p4 Site Code: 09-024-4 Start Date: 4/28/2009

Page No : 1

Groups Printed- Pass Veh - Heavy Veh - School Bus Tech City Driveway Boices Lane Morton Boulevard **Boices Lane** Southbound Westbound Northbound Eastbound Left Thru Right STOR App Total int. Total Thru Right RTOR -∞ Left Left Start Time Left Thru Right aton App. Total Thru Right RTOR Factor 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 ō ō 04:00 PM ō ö 04:15 PM n 04:30 PM 04:45 PM 3 ö õ ĝ Ō Total 05:00 PM ΔΔ 05:15 PM O O 05:30 PM 05:45 PM Total ö Ö 12 340 Grand Total 0.5 0.1 Apprch % 66.7 33.3 36.7 63.1 0.2 57.4 8.1 55.2 33.5 11.3 29.3 0.3 0.1 29.3 16.8 0.2 2.4 22.6 4.6 Total % 0.1 0.4 10.8 18.5 13.7 Pass Veh  $\bar{0}$ ž õ ĩ 99.9 99.6 99.4 99.5 % Pass Veh 87.5 91.7 99.8 99.4 98.7 98.699.2 Ō ō ō ō ō Ö Heavy Veh 0.4 1.3 0.3 0.3 0.3 0.3 % Heavy Veh 8.3 Ö Ö Ö Ö School Bus 



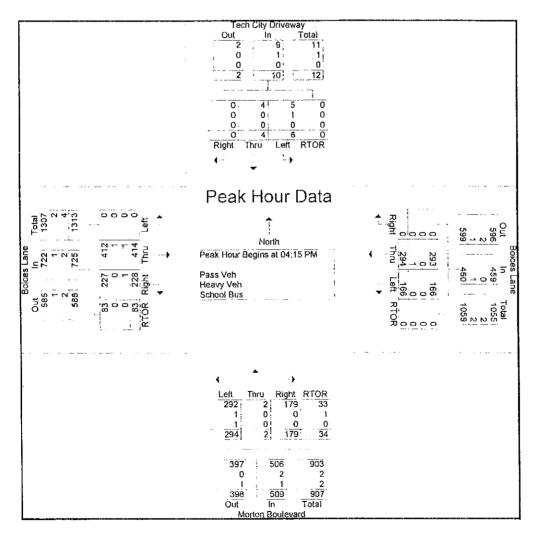
Project: 09-024d Counted By: DAT Location: Ulster, NY

Other:

File Name: tm09024p4 Site Code: 09-024-4 Start Date: 4/28/2009

Page No : 2

	T		ity Di uthbo	rivewa und	ıy			ices L estboi				Μo	rthbo	ilevare und	d .			ices L Istbol			
Start Time	Left		Right		App. Total	Left		Right	RTOR	Acp. Total	Left	Thru	Right	RTOR	App, Tetal	Left	Thru	Right	RTOR	App. Total	int Total
Peak Hour A	Analys	is Fro	ന 4:0	0:00 P	M to 5:	45:00	PM -	Peak	1 of 1												
Peak Hour	for Ent	tire Int	ersec	tion Be	egins at	t 4:15:	00 P۸	Λ													
4:15:00 PM	0	1	0	0	1	39	54	0	0	93	71	0	45	13	129	0	87	40	16	143	366
4:30:00 PM	5	0	0	0	5	43	74	0	0	117	77	1	38	6	122	0	125	77	26	228	472
4:45:00 PM	1	2	0	0	3	40	89	0	0	129	59	0	52	8	119	0	99	54	19	172	423
5:00:00 PM	0	1	0	0	1	44	77	0	0	121	87	1	44	7	139	0	103	57	22	182	443
Total Volume	6	$\bar{4}$	0	0	10	166	294	0	0	460	294	2	179	34	509	0	414	228	83	725	1704
% App. Total	60	40	0	0		36.1	63.9	0	0		57.8	0.4	35.2	6.7		0	57.1	31.4	11.4		
PHF	.300	.500	.000	.000	.500	.943	.826	.000	.000	.891	.845	.500	.861	.654	.915	.000	.828	.740	.798	.795	.903
Pass Veh	5	4	0	0	9	166	293	Õ	0	459	292	2	179	33	506	0	412	227	83	722	1696
% Pass Veh	83.3	100	0	0	90.0	100	99.7	0	0	99.8	99.3	100	100	97.1	99.4	0	99.5	99.6	100	99.6	99.5
Heavy Veh	1	0	0	0	1	0	0	0	0	0	1	0	0	1	2	0	1	0	0	1	. 4
% Heavy Veh	16.7	0	0	0	10.0	0	0	0	0	0	0.3	0	0	2.9	0.4	0	0.2	0	0	0.1	0.2
School Bus	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	1	0	2	4
% School Bus	0	0	0	0	0	. 0	0.3	0	0	0.2	0.3	0	0	0	0.2	0	0.2	0.4	0	0.3	0.2





Project: 09-024d Counted By: DPR Location: Ulster, NY Other:

File Name : tm09024p3 Site Code : 09-024-3 Start Date : 4/28/2009 Page No : 1

						Grou	ıps Pı	rinted	- Pass	Veh -	Heav	y Veh	- Sch	ool B	us						
	J	ohn N	À Clar	k Roa	ad		Во	ices L	ane			Reta	il Driv	eway			Во	ices L	ane		
;		Soi	<b>ı</b> thbo	und			We	estboo	bnı			No	rthbo	und			Ea	istbol	ınd		
Start Time	Left	Thru	Right	RTOR	Asp. Tetar	Left	Thru	Right	RTOR .	Арр. Тоше	Left.	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Tetal	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	7	4	25	28	64	4	76	5	0	85	4	1	1	1	7	19	97	8	0	124	280
04:15 PM	5	4	14	28	51	0	47	2	0	49	7	0	3	1	11	33	96	7	0	136	247
04:30 PM	11	1	13	21	46	0	71	4	0	75	4	2	2	0	8	37	127	4	0	168	297
04:45 PM (	5	2	18	22	47	4	81	6	0	91	4	1	2	0	7	42	110	12	1	165	310
Total	28	11	70	99	208	8	275	17	0	300	19	4	8	2	33	131	430	31	1	593	1134
05:00 PM	3	0	10	33	46	3	66	0	1	70	7	1	0	1	9	31	94	5	4	134	259
05:15 PM	4	3	21	26	54	4	67	3	1	75	10	2	3	2	17	28	95	7	0	130	276
05:30 PM	4	0	13	26	43	2	58	6	0	66 .	. 4	2	2	2	10	28	87	5	1	121	240
05:45 PM	3	1	8	20	32	3	68	6	1	78 '	7	2	· <u>0</u> 5	1	10	19	86	4	1	110	230
Total	14	. ~~~	52	105	175	12	259	15	3	289	28	7	5	6	46	106	362	21	6	495	1005
Grand Total	42	15	122	204	383	20	534	32	3	589	47	11	13	8	79	237	792	52	7	1088	2139
Approh %	11	3.9	31.9	53.3		3.4	90.7	5.4	0.5	i	59.5	13.9	16.5	10.1		21.8	72.8	4.8	0.6		
Total %	2	0.7	5.7	9.5	17.9	0.9	25	1.5	0.1	27.5	2.2	0.5	0.6	0.4	3.7	11.1	37	2.4	0.3	50.9	
Pass Veh	40	15	122	204	381	20	532	31	3	586	47	11	13	8	79	237	785	51	7	1080	2126
% Pass Veh	95.2	100	100	100	99.5	100	99.6	96.9	100	99.5	100	100	100	100	100	100	99.1	98.1	100	99.3	99.4
Heavy Veh	2	0	0	0	2	0	1	1	0	2	0	0	0	0	0	0	6	1	0	7	11
% Heavy Veh	4.8	0	0	0	0.5	0	0.2	3.1	0	0.3	0	0	0	0	0	0	8.0	1 <u>.9</u>	0	0.6	0.5
School Bus	0	Ő	0	0	0	Ō	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% School Bus	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0.1	0	0	0.1	0.1

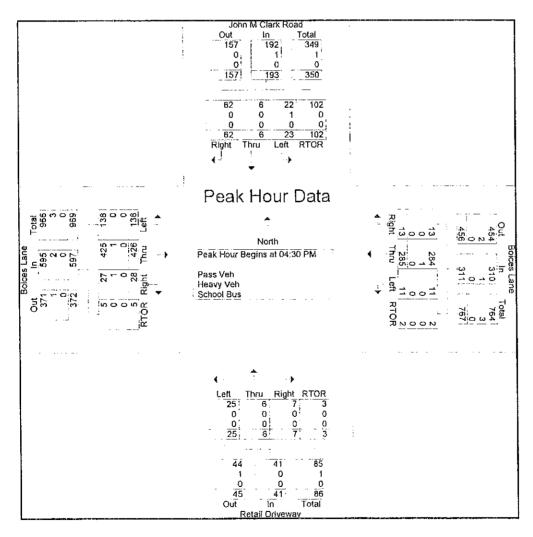


Project: 09-024d Counted By: DPR Location: Úlster, NY

Other:

File Name : tm09024p3 Site Code : 09-024-3 Start Date : 4/28/2009 Page No : 2

	Ĵ		/ Clar uthbo	k Roa und	d .			ices L					il Drív rthbo	eway				ices L			
Start Time					App Total					App. Total	Left	Thru	Right	RTOR !	App. Total	Left	Thru	Right	ATCA	App. Total	Int. Total
Peak Hour /									1 of 1												
Peak Hour f	or Ent	ire Int	ersect	tion Be	egins at	4:30:	00 PN	Λ													
4:30:00 PM	11	1	13	21	46	0	71	4	0	75	4	2	2	0	8	37	127	4	0	168	297
4:45:00 PM	. 5	2	18	22	47	4	81	6	0	91	4	1	2	0	7	42	110	12	1	165	310
5:00:00 PM,	. 3	0	10	33	46	3	66	0	1	70	7	1	0	1	9	31	94	5	4	134	259
5:15:00 PM	4	3	21	26	54	4	67	3	1	75	10	2	3	2	17	28	95	_7_	. 0	130	276
Total Volume	23	6	62	102	193	11	285	13	2	311	25	6	7	3	41	138	426	28	5	597	1142
% App. Total	11.9	3.1	32.1	52.8		3.5	91,6	4.2	0.6		61	14.6	17.1	7.3		23.1	71.4	4.7	0.8		
PHF	.523	.500	.738	.773	.894	.688	.880	.542	.500	.854	.625	.750	.583	.375	.603	.821	.839	.583	.313	.888	.921
Pass Veh	22	6	62	102	192	11	284	13	2	310	25	6	7	3	41	138	425	27	5	595	1138
% Pass Veh	95.7	100	100	100	99.5	100	99.6	100	100	99.7	100	100	100	100	100	100	99.8	96.4	100	99.7	99.6
Heavy Veh	1	0	0	0	1 :	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	4
% Heavy Veh	4.3	0	0	0	0.5	0	0.4	0	0	0.3	0	0	0	0	0	0	0.2	3.6	0	0.3	0.4
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% School Bus	0	0	0	0	0 '	0	0	0	0	0.	0	0	0	0	0	0	0	0	0	0	0



## **Appendix C – Automatic Traffic Recorder Data**

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

# MetroCount Traffic Executive Weekly Event Counts

#### √eeklyEvent-794 -- English (ENU)

Datasets:

Site: [09-024d] Enterprise Drive - NB Lanes Input A: 1 - North bound. - Added to totals. (1)

Input B: 3 - South bound. - Excluded from totals. (0)

Survey Duration: 11:00 Tuesday, April 28, 2009 => 8:58 Thursday, May 07, 2009

File: C:\Documents and Settings\dreynolds\Desktop\ATR Unload\09-024d07May2009EnterpriseDr.EC0

(Plus)
Identifier: R719

Identifier: R7190MC2 MC56-L5 [MC55] (c)Microcom 19Oct04

Algorithm: Event Count

Data type: Axle sensors - Split (Count)

Profile:

Filter time: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Name: Factory default profile

Scheme: Count events divided by two.

Units: Non metric (ft, mi, ft/s, mph, lb, ton)

In profile: Events = 112341 / 113181 (99.26%)

## **Weekly Event Counts**

TeeklyEvent-794

ite:

09-024d.0N

Description:

Enterprise Drive - NB Lanes

Filter time:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme: Count events divided by two.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	27 Apr	28 Apr	29 Apr	30 Apr	01 May	02 May	03 May	1 - 5	1 - 7
Hour	*		0.5		2.5	2.7			
0000-0100	*	*	29	31	35	37	40	31.7	34.4
0100-0200	*	* .	20	12	11	17	17	14.3	15.4
0200-0300		*	9	7	9	14	8	8.3	9.4
0300-0400	*	*	13	10	10	11	6	11.0	10.0
0400-0500	*	*	9	7	11	12	4	9.0	8.6
0500-0600	* *	*	41	50	40	25	24	43.7	36.0
0600-0700	*	*	132	114	129	109	56	125.0	108.0
0700-0800	* *	<b>*</b>	333	410<	384	209	64	375.7	280.0
0800-0900	*	*	342	306	352	254	118	333.3	274.4
0900-1000	*		269	301	293	384	166	287.7	282.6
1000-1100		*	356	314	345	493	234	338.3	348.4
1100-1200	*		393<	352	416<	632<	282<	387.0<	415.0<
1200-1300	*	*	459	533	473	675<	347	488.3	497.4
1300-1400		478	508	546	535	671 500	320	516.8	509.7
1400-1500	*	606	622	615	667	593	384<	627.5	581.2
1500-1600		809	879	778	867	574	374	833.3	713.5
1600-1700	*	938	1006<	932<	1035<	463	352	977.8<	787.7<
1700-1800	*	700	842	798	776	398	352	779.0	644.3
1800-1900	*	511	570	594	476	389	276	537.8	469.3
1900-2000	*	414	407	351	462	315	233	408.5	363.7
00-2100	*	338	387	326	367	256	185	354.5	309.8
2100-2200	*	224	210	210	320	183	111	241.0	209.7
2200-2300	*	163	174	153	202	115	75	173.0	147.0
2300-2400	*	40	57	63	82	81	28	60.5	58.5
Totals			=						
0700-1900	±	*	6579	6479	6619	5735	1 3269	6482.3	5803.5
0600-2200	*	*	7715	7480	7897	6598	3854	7611.3	6794.6
0600-0000	*	*	7946	7696	8181	6794	3957	7844.8	7000.1
0000-0000	*	*	8067	7813	8297	6910	4056	7962.8	7113.9
AM Peak	*	*	1100	0700	1100	1100	11 <b>0</b> 0		
	*	*	393	410	416	632	282		
PM Peak	*	*	1600	1600	1600	1200	1400		
	*	*	1006	932	1035	675	384		

<sup>\* -</sup> No data.

## Weekly Event Counts

YeeklyEvent-794

اد.ite:

09-024d.0N

Description:

Enterprise Drive - NB Lanes

Filter time:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme: Count events divided by two.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	04 May	05 May	06 May	07 May	08 May	09 May	10 May	1 - 5	1 - 7
Hour							. !		
0000-0100	9	33	37	*	*	*	*	26.3	26.3
0100-0200	14	5	11	*	*	*	*	10.0	10.0
0200-0300	7	13	5	*	*	*	*	8.3	8.3
0300-0400	7	8	6	*	*	<b>.</b>	* [	7.0	7.0
0400-0500	4	8	14	*	*	*	*	8.7	8.7
0500-0600	42	49	53	*	*	*	* {	48.0	48.0
0600-0700	141	131	147	*	*	*	*	139.7	139.7
0700-0800	380<	379<	392	*	*	*	*	383.7<	383.7<
0800-0900	284	319	298	*	*	*	*	300.3	300.3
0900-1000	255	286	267	*	*	*	*	269.3	269.3
1000-1100	322	321	374	*	*	*	*	339.0	339.0
1100-1200	375	370	398<	*	*	*	* [	381.0	381.0
1200-1300	470	522	515	*	*	*	* [	502.3	502.3
1300-1400	525	500	500	*	*	*	*	508.3	508.3
1400-1500	644	606	*	*	*	*	*	625.0	625.0
1500-1600	782	751	*	*	*	*	*	766.5	766.5
1600-1700	955<	870<	*	*	*	k	*	912.5<	912.5<
1700-1900	711	719	*	*	*	*	*	715.0	715.0
1800-1900	494	469	*	*	*	*	*	481.5	481.5
1900-2000	347	345	*	*	*	*	*	346.0	346.0
00-2100	302	289	*	*	*	k	*	295.5	295.5
2100-2200	167	176	*	*	*	*	*	171.5	171.5
2200-2300	92	122	*	*	*	*	*	107.0	107.0
2300-2400	57	4 4	*	*	*	*	*	50.5	50.5
Totals						<del></del>			
0700-1900	6197	6112	*	*	*	*	*	   6184.5	6184.5
0600-2200	7154	7053	£	*	*	*	*	7137.2	7137,2
0600-0000	7303	7219	*	*	*	*	*	7294.7	7294.7
0000-0000	7386	7335	*	*	*	*	*	7403.0	7403.0
AM Peak	0700	0700	1100	*	*	*	*	 	
TALL EGY	380	379	398	*	*	*	*	i İ	
PM Peak	1600	1600	*	*	*	*	*	 	
In rear	955	870	*	*	*	*	*		

<sup>\* -</sup> No data.

# MetroCount Traffic Executive Weekly Event Counts

#### \_veeklyEvent-795 -- English (ENU)

Datasets:

Site: [09-024d] Enterprise Drive - SB Lanes
Input A: 1 - North bound. - Excluded from totals. (0)
Input B: 3 - South bound. - Added to totals. (1)

Survey Duration: 11:00 Tuesday, April 28, 2009 => 8:58 Thursday, May 07, 2009

File: C:\Documents and Settings\dreynolds\Desktop\ATR Unload\09-024d07May2009EnterpriseDr.EC0

(Plus)

Identifier: R7190MC2 MC56-L5 [MC55] (c)Microcom 19Oct04

Algorithm: Event Count

Data type: Axle sensors - Split (Count)

Profile:

Filter time: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Name: Factory default profile

Scheme: Count events divided by two.

Units: Non metric (ft, mi, ft/s, mph, lb, ton)
In profile: Events = 112341 / 113181 (99.26%)

### **Weekly Event Counts**

YeeklyEvent-795

ite:

09-024d.0N

Description:

Enterprise Drive - SB Lanes

Filter time:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme: Count events divided by two.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun 03 May	Average 1 - 5	
Hour	27 Apr	28 Apr	29 Apr	30 Apr	01 May	02 May	U3 May	1 - 5	1 - 7
0000-0100	*	*	13	8	13	28	37	11.3	10.0
0100-0100	*	*	13	7	13 4	13	21	7.3	19.8 11.2
0200-0300	*	^ *	13	7	7	12	8 1	9.0	9.4
0300-0400	*	*	7	12	9	12	7	9.3	9.4
0400-0500	^ *	*	16	22	18	10	8	18.7	14.8
0500-0600	*	*	90	107	77	24	22	91.3	64.0
0600-0700	*	*	317	291	339	90	58 I	315.7	219.0
0700-0800	*	*	783<	761<	694<	242	105 }	746.0<	517.0<
0800-0900	*	*	560	608	587	403	164	585.0	464.4
0900-1000	*	*	462	451	367 447	526	227	453.3	422.6
1000-1100	*	*	372	403	419	639	290	398.0	424.6
1100-1100	*	*	504	403 451	502	688<	350<1	485.7	424.0
1200-1200	*	*	485	490	532	605<	382	502.3	498.8
1300-1300	*	433	464	424	533	565	432<	463.5	475.2
1400-1500	*	458	469	440	505	467	363	468.0	473.2
1500-1600	*	614	637	589<	6 <b>42</b> <	494	280	620.5<	542.7<
1600-1700	*	553	567	571	592	427	269	570.8	496.5
1700-1800	*	543	693<	584	597	387	230	604.3	505.7
1800-1900	*	328	465	368	424	334	194	396.3	352.2
1900-2000	*	240	286	250	292	212	150	267.0	238.3
200-2100	*	153	194	242	176	183	145	191.3	182.2
2100-2200	*	97	84	74	122	127	50		92.3
2200-2300	*	57	57	61	77	66	44		60.3
2300-2400	*	37 37	55	43	60	57	40	48,8	48.7
2300 2400		3,	95	45	00	3,	10 1	40,0	40.7
Totals					<del> </del>				<del></del>
0700-1900	*	*	6461	6140	6474	577 <i>7</i>	3286 J	6293.6	5648.9
0600-2200	*	*	7342	6997	7403	6389	3689	7161.8	6380.7
0600-0000	*	*	7454	7101	7540	6512	3773	7273.5	6489.7
0000-0000	*	*	7604	7264	7668	6611	3876	7420.5	6618.3
AM Peak	*	*	0700	0700	0700	1100	1100		
	*	*	783	761	694	688	350 I		
PM Peak	*	*	1700	1500	1500	1200	1300		
	*	*	693	589	642	605	432		

<sup>\* -</sup> No data.

### **Weekly Event Counts**

YeeklyEvent-795

ite: 09-024d.0N

Description: Enterprise Drive - SB Lanes

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009 Count events divided by two. Filter time:

Scheme:

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	04 May	05 May	06 May	07 May	08 May	09 May	10 May	1 - 5	1 - 7
Hour							. !		
0000-0100	10	10	13	*	*	*	*	11.0	11.0
0100-0200	6	9	4	*	*	*	*	6.3	6.3
0200-0300	3	4	11	*	*	*	*	6.0	6.0
0300-0400	11	12	8	*	k	*	*	10.3	10.3
0400-0500	11	24	14	*	*	*	*	16.3	16.3
0500-0600	93	94	101	*	*	*	*	96.0	96.0
0600-0700	338	322	301	*	*	*	* !	320.3	320.3
0700-0800	709<		725<	*	*	*	* 1	716.3<	716.3<
0800-0900	589	521	565	k	*	*	*	558.3	558.3
0900-1000	407	464	428	*	*	*	*	433.0	433.0
1000-1100	418	375	397	*	*	*	*	396.7	396.7
1100-1200	462	422	431	*	*	*	*	438.3	438.3
1200-1300	428	477	490	*	۶	*	*	465.0	465.0
1300-1400	461	422	420	*	*	*	*	434.3	434.3
1400-1500	461	448	*	*	*	*	*	454.5	454.5
1500-1600	596<		*	*	*	*	*	608.5<	608.5<
1600-1700	483	496	*	*	*	*	*	489.5	489.5
1700-1800	540	516	*	*	*	*	*	528.0	528.0
1800-1900	369	331	*	*	*	*	*	350.0	350.0
1900-2000	255	201	*	*	*	*	*	228.0	228.0
000-2100	125	162	*	k	*	*	*	143.5	143.5
2100-2200	88	78	*	*	*	*	*	83.0	83.0
2200-2300	54	57	*	*	*	*	*	55.5	55.5
2300-2400	55	42	*	*	*	*	*	48.5	48.5
Totals								 	
0700-1900	5923	5808	*	*	*	*	*	!   5872.5	5872.5
0600-2200	6729	6571	*	*	*	*	*	6647.3	6647.3
0600-0000	6838	6670	*	*	*	*	*	6751.3	6751.3
0000-0000	6972	6823	*	*	*	*	*	6897.3	6897.3
AM Peak	0700	0700	0700	*	*	*	*	 	
wu sear	709	715	725	*	*	*	*	l I	
	109	113	123					ı t	
PM Peak	1500	<b>1</b> 500	*	*	*	*	*	E .	
	596	621	*	*	*	*	*	, I	
								-	

<sup>\* -</sup> No data.

# MetroCount Traffic Executive Weekly Vehicle Counts

#### WeeklyVehicle-796 -- English (ENU)

Datasets:

Site: [09-024d] Boices Lane - Just East of Dalewood St

Direction: 8 - East bound A>B, West bound B>A., Lane: 0

**Survey Duration:** 11:00 Tuesday, April 28, 2009 => 9:03 Thursday, May 07, 2009

File: C:\Documents and Settings\dreynolds\Desktop\ATR Unload\09-024d07May2009BoicesLn.EC0 (Plus)

Identifier: R519M98M MC56-L5 [MC55] (c)Microcom 19Oct04

Algorithm: Factory default

Data type: Axle sensors - Paired (Class, Speed, Count)

Profile:

Filter time: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

Speed range:5 - 100 mph.Direction:East, West (bound)Separation:All - (Headway)Name:Factory default profile

Scheme: Vehicle classification (Scheme F2)
Units: Non metric (ft, mi, ft/s, mph, lb, ton)
In profile: Vehicles = 102821 / 105075 (97.85%)

### **Weekly Vehicle Counts**

YeeklyVehicle-796

ite: 09

09-024d.0WE

Description: Boices Lane - Just East of Dalewood St

Filter time: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme: Vehicle classification (Scheme F2)

Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13 ) Dir(EW) Sp(5,100) Sep(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	27 Apr	28 Apr	29 Apr	30 Apr	01 May	02 May	03 May	1 - 5	1 - 7
Hour							_ [		
0000-0100	*	*	36	36	43	62	58	38.3	47.0
0100-0200	*	*	20	22	14	29	35	18.7	24.0
0200-0300	*	*	27	14	23	13	23	21.3	20.0
0300-0400	*	*	28	29	27	18	14		23.2
0400-0500	*	*	22	28	36	24	20		26. <b>0</b>
0500-0600	*	*	139	151	116	43	42		98.2
0600-0700	*	*	383	345	403	157	105		278.6
0700-0800	*	*	841	926<	857	382	155		632.2
0800-0900	*	*	837	858	838	606	275		682.8
0900-1000	*	*	707	698	703	831	383		664.4
1000-1100	*	*	680	705	743	1014	477		723.8
1100-1200	*	k	860<	789	910<	115 <b>5</b> <	591<		861.0<
1200-1300	*	*	959	1036	1080	1036	695		961.2
1300-1400	*	854	919	929	1083	1090<	722<		932.8
1400-1500	*	951	1010	922	1107	949	695		939.0
1500-1600	*	1190	1275	1199	1384	970	612		1105.0
1600- <b>1</b> 700	*	1260	1320<	1329<	1395<	816	604	1326.0<	1120.7<
1700-1800	*	1122	1301	1252	1285	731	555		1041.0
800-1900	*	778	955	881	916	692	459		780.2
900−2000	k	627	643	605	730	504	369		579.7
2000-2100	*	435	517	548	524	411	302		456.2
2100-2200	*	284	312	259	418	323	162		293.0
2200-2300	*	179	226	193	238	166	111		185.5
2300-2400	*	72	107	100	129	132	68	j 102.0	101.3
Totals						<del></del>	· <del>=····</del>	'   	
0700-1900	*	*	11664	11524	12301	10272	6223	  11663.3	10444.1
0600-2200	*	*	13519	13281	14376	11667		13515.8	12051.5
0600-0000	*	*	13852	13574	14743	11965		13826.8	12338.3
0000-0000	*	*	14124	13854	15002	12154	7532	14097.1	12576.7
AM Peak	*	*	1100	0700	1100	1100	1100	! !	
	*	*	860	926	910	1155	591	i I	
			5.50	<del></del>	220			i i	
PM Peak	*	*	1600	1600	1600	1300	1300	i I	
<del></del> -	*	*	1320	1329	1395	1090	722		

<sup>\* -</sup> No data.

YeeklyVehicle-796

۔ ite: 09-024d.0WE

Description:

Boices Lane - Just East of Dalewood St

Filter time:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Vehicle classification (Scheme F2)

Scheme: Filter:

Cls(1 2 3 4 5 6 7 8 9 10 11 12 13 ) Dir(EW) Sp(5,100) Sep(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	0 <b>4 M</b> ay	05 May	06 May	07 May	08 May	09 May	10 May	1 - 5	1 - 7
Hour								i	
0000-0100	31	34	34	*	×	*	*	33.0	33.0
0100-0200	15	17	14	*	×	*	*	15.3	15.3
0200-0300	11	24	22	*	×	*	*	19.0	19.0
0300-0400	14	19	13	*	*	*	.*	15.3	15.3
0400-0500	18	29	27	*	*	*	*	24.7	24.7
0500-0600	131	138	132	*	*	*	*	133.7	133.7
0600-0700	382	356	336	*	*	*	*	358.0	358.0
0700-0800	871<	874<	848<	*	*	×	k	864.3<	864.3<
0800-0900	790	765	768	÷	*	*	*	774.3	774.3
0900-1000	611	680	667	*	*	*	*	652.7	652.7
1000-1100	717	641	731	*	*	*	*	696.3	696.3
1100-1200	812	787	812	*	*	*	k	803.7	803.7
1200-1300	925	1004	1035	*	*	*	*	988.0	988. <b>0</b>
1300-1400	951	895	909	*	*	*	*	918.3	918.3
1400-1500	950	937	*	*	*	*	*	943.5	943.5
1500-1600	1231	1166	*	*	*	*	*	1198.5	1198.5
1600-1700	1243<	1257<	*	*	*	*	*	1250.0<	1250.0<
1700-1800	1165	1170	*	*	*	*	k	1167.5	1167.5
1800-1900	809	715	*	*	*	*	*	762.0	762.0
900-2000	598	539	*	*	*	*	*	568.5	568.5
2000-2100	400	394	*	*	*	*	*	397.0	397.0
2100-2200	246	224	*	*	*	*	*	235.0	235.0
2200-2300	134	160	*	*	*	*	*	147.0	147.0
2300-2400	103	72	*	*	*	*	*	87.5	87.5
								ĺ	
Totals .								!	
0700-1900	11075	10891	*	*	*	*	k	  11019.2	11019.2
0600-2200	127 <b>0</b> 1	12404	*	*	*	*		12577.7	12577.7
0600-0000	12938	12636	*	*	*	k		112812.2	12812.2
0000-0000	13158	12897	*	*	*	*		113053.2	13053.2
0000 0000	13130	12071							13033.2
AM Peak	0700	0700	0700	*	*	*	k	1	
	871	874	848	*	k	*	*		
PM Peak	1600	1600	*	*	*	*	*	1	
	1243	1257	*	*	*	*	*	<u> </u>	

<sup>\* -</sup> No data.

# MetroCount Traffic Executive Weekly Vehicle Counts

#### √eeklyVehicle-796 -- English (ENU)

Datasets:

Site: [09-024d] Boices Lane - Just East of Dalewood St

Direction: 8 - East bound A>B, West bound B>A., Lane: 0

Survey Duration: 11:00 Tuesday, April 28, 2009 => 9:03 Thursday, May 07, 2009

File: C:\Documents and Settings\dreynolds\Desktop\ATR Unload\09-024d07May2009BoicesLn.EC0 (Plus)

Identifier: R519M98M MC56-L5 [MC55] (c)Microcom 19Oct04

Algorithm: Factory default

Data type: Axle sensors - Paired (Class, Speed, Count)

Profile:

Filter time: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

Speed range:5 - 100 mph.Direction:[A-B] East (bound)Separation:All - (Headway)Name:Factory default profile

Scheme: Vehicle classification (Scheme F2)
Units: Non metric (ft, mi, ft/s, mph, lb, ton)

In profile: Vehicles = 57064 / 105075 (54.31%)

YeeklyVehicle-796

ite:

09-024d.0WE

Description:

Boices Lane - Just East of Dalewood St

Filter time: Scheme: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Vehicle classification (Scheme F2)

Filter:

Cis(1 2 3 4 5 6 7 8 9 10 11 12 13 ) DirAB(E) Sp(5,100) Sep(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	27 Apr	28 Apr	29 Apr	30 Apr	01 May	02 May	03 May	1 - 5	1 - 7
Hour	*	*	3.5	2.1	20	37	30	22.0	26 6
0000-0100	*	*	25	21 12	20 6	17	23	22.0 9.0	26.6 13.4
0100-0200	*	*	9			7	23   14		
0200-0300	*	*	16	8 15	12 16	11	9	12.0 14.7	11.4 12.8
0300-0400	*	*	13			14	13	19.7	17.2
0400-0500	*	*	16 81	20 92	23 62	27	24	78.3	57.2
0500-0600	*	*	182	169	217	81	60 I	189.3	141.8
0600-0700 0700-0800	*	*	182 467	492	447	210	106	468.7	344.4
0800-0800	*	*	507	553<	515	390	173	525.0<	427.6
0900-0900	*	*	459	440	431	520	246	443.3	419.2
1000-1000	· k	*	394	427	455	613	293 I	425.3	436.4
1100-1200	*	*	5 <b>13</b> <	476	542<	686<	353<	510.3	514.0<
1200-1200	*	*	561	595	634	587	400	596.7	555.4
1300-1400	*	471	527	492	624	591<	449<	528.5	525.7
1400-1500	*	517	527	466	592	493	379 [	525.5	495.7
1500-1600	*	728	712	710	797<	528	292	736.8	627.8<
1600-1700	*	714	706	757<	774	465	301	737.8<	619.5
1700-1800	*	622	728<	666	691	416	262	676.8	564.2
1800-1900	*	386	507	428	520	350	219	460.3	401.7
300-2000	*	290	331	314	348	241	167 i	320.8	281.8
2000-2100	*	188	244	299	227	205	154 j	239.5	219.5
2100-2200	*	136	157	121	185	163	75	149.8	139.5
2200-2300	*	99	115	95	98	73	48	101.8	88.0
2300-2400	*	46	62	57	67	70	46 i	58.0	58.0
Totals							<u> </u>		
0700-1900	<b>±</b>	*	6608	6502	7022	5849	3473 I	6634.8	5931.5
0600-2200	*	+	7522	7405	7999	6539	3929 j	7534.2	6714.1
0600-0000	*	*	7699	7557	8164	6682	4023		6860.1
0000-0000	*	*	7859	7725	8303	6795	4136	7849.6	6998.7
AM Peak	*	*	1100	<b>0</b> 800	1100	1100	1100		
AM Peak	*	*	513	553	542	686	353		
	•	•	212	2.2	J4Z	000	7.73		
PM Peak	*	*	1700	1600	1500	1300	1300		
	*	*	728	757	797	591	449		

<sup>\* -</sup> No data.

VeeklyVehicle-796

ıite: ُ

09-024d.0WE

Description:

Boices Lane - Just East of Dalewood St

Filter time:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme:

Vehicle classification (Scheme F2)

Filter:

Cls(1 2 3 4 5 6 7 8 9 10 11 12 13 ) DirAB(E) Sp(5,100) Sep(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
Hour	04 May	05 May	06 May	07 May	08 May	09 May	10 May	<b>1 -</b> 5	1 - 7
0000-0100	17	13	19	*	*	*	i ★	16.3	16.3
0100-0100	7	13	9	*	*	*	^   *	16.3 9.3	16.3 9.3
0200-0300	4	10	9 12	*	*	*	^ I	9.3 8.7	
0300-0400	9	12	11	· *	*	*	* 1	10.7	8.7
0400-0500	14	23	17	*	*	*	^	18.0	10.7
0500-0600	82	∠s 79	82	*	*	*	* 1	81.0	18.0 81.0
0600-0700	196	191	173	*	*	*	* 1	186.7	186.7
0700-0800	475	475<	173 454	*	*	*	" ! ★	468.0	468.0
0800-0900	509<	456	454 486<	*	*	*	*	483.7<	488.0
0900-1000	376	430	417	•	*		*	483.7	483.7
1000-1000	445	368	417	*	*	*	* 1	410.7	410.7
1100-1100	496	459	459	•	*		* 1	413.0	471.3
1200-1200	517	546	607	- *	*	*	* 1	556.7	556.7
1300-1400	507	471	484	*	*		±	487.3	487.3
1400-1500	490	496	404	*	*	*	*	493.0	493.0
1500-1600	71 <b>1</b> <	680	*	*	*	*	* :	695.5	695.5
1600-1700	663	732<	*	*	*	*	*	697.5<	697.5<
1700-1800	628	615	*	*	*	*	*	621.5	621.5
1800-1900	415	366	*	*	*	*	*	390.5	390.5
900-2000	309	253	*	*	*	*	*	281.0	281.0
2000-2100	172	185	*	*	*	*	*	178.5	178.5
2100-2200	116	96	*	k	*	*	*	106.0	106.0
2200-2300	73	73	*	*	*	*	*	73.0	73.0
2300-2400	65	47	*	*	*	*	*	56.0	56.0
									00.0
Tota1s									
0700-1900	6232	6103	*	*	*	*	*	I I 6188.7	6188.7
0600-2200	7025	6828	*	*	*	*	*	6940.8	6940.8
0600-0000	7163	6948	*	*	*	*	*	7069.8	7069.8
0000-0000	<b>7</b> 296	7097	*	*	*	*	*	7213.8	7213.8
	,250	,051						,213.0 	,213.0
AM Peak	0800	0700	0800	*	*	*	*		
	509	475	486	*	*	*	*	!	
PM Peak	1500	160 <b>0</b>	*	*	*	*	*	 	
en easr	711	732	*	*	*	*	*	! !	
	, 11	122						•	

<sup>\* -</sup> No data.

#### MetroCount Traffic Executive Weekly Vehicle Counts

#### WeeklyVehicle-796 -- English (ENU)

Datasets:

Site: [09-024d] Boices Lane - Just East of Dalewood St

Direction: 8 - East bound A>B, West bound B>A., Lane: 0

11:00 Tuesday, April 28, 2009 => 9:03 Thursday, May 07, 2009 Survey Duration:

C:\Documents and Settings\dreynolds\Desktop\ATR Unload\09-024d07May2009BoicesLn.EC0 (Plus) File:

R519M98M MC56-L5 [MC55] (c)Microcom 19Oct04 Identifier:

Factory default Algorithm:

Axle sensors - Paired (Class, Speed, Count) Data type:

Profile:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009 Filter time:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 Included classes:

Speed range: 5 - 100 mph. Direction: [B-A] West (bound) Separation: All - (Headway)

Name: Factory default profile

Scheme: Vehicle classification (Scheme F2) Non metric (ft, mi, ft/s, mph, lb, ton) Units: Vehicles = 45757 / 105075 (43.55%) In profile:

VeeklyVehicle-796

ite: ُ

09-024d.0WE

Description:

Boices Lane - Just East of Dalewood St

Filter time:

13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme: Vehicle classification (Scheme F2)

Filter:

Cls(1 2 3 4 5 6 7 8 9 10 11 12 13 ) DirBA(W) Sp(5,100) Sep(>0)

		Mon		Tue		Wed		Thu		Fri		Sat		Sun	Αv	erages	3
	27	Apr	28	Apr	29	Apr	30	Apr	01	May	02	May	03	May	1	- 5	1 - 7
Hour														1			
0000-0100		*		*		11		15		23		25		28	1	.6.3	20.4
0100-0200		×		*		11		10		8		12		12		9.7	10.6
0200-0300		*		*		11		6		11		6		9		9.3	8.6
0300-0400		*		*		15		14		11		7		5 1	1	.3.3	10.4
0400-0500		*		*		6		8		13		10		7		9.0	8.8
0500-0600		*		*		58		59		54		16		18		7.0	41.0
0600-0700		*		*		201		176		186		76		45		37.7	136.8
0700-0800		*		*		374<		434<		410<		172		49		6.0<	287.8
0800-0900		*		*		330		305		323		216		102		19.3	255.2
0900-1000		×		*		248		258		272		311		137		59,3	245.2
1000-1100		*		*		286		278		288		401		184		34.0	287.4
1100-1200		*		*		347		313		368		469<		238<		12.7	347.0<
1200-1300		*		*		398		441		446		449		295 (		28.3	405.8
1300-1400		*		383		392		437		459		499<		273		L7.8	407.2
1400-1500		*		434		483		456		515		456		316		72.0	443.3
1500-1600		*		462		563		489		587		442		320<		25.3	477.2
1600-1700		*		546		614<		572		621<		351		303		38.3<	501.2<
1700-1800		*		500		573		586<		594		315		293		53.3	476.8
1800-1900		*		392		448		453		396		342		240 [		22.3	378.5
900-2000		*		337		312		291		382		263		202		30.5	297.8
2000-2100		*		247		273		249		297		206		148		56.5	236.7
2100-2200		*		148		155		138		233		160		87		58,5	153.5
2200-2300		*		80		111		98		140		93		63 j		07.3	97.5
2300-2400		*		26		45		43		62		62		22 J	4	44.0	43.3
														I			
Totals														!			
		*		*		- <b>^</b> -		F 0 0 0				4423		ا   2750	E 0.	28.4	4E10 C
0700-1900				*		5056		5022		5279				2750   3232		81.6	4512.6 5337.4
0600-2200		*				5997		5876		6377		5128					
0600-0000		*		*		6153		6017		6579		5283				32.8	5478.2
0000-0000		*		*		6265		6129		6699		5359		3396	62	47.5	5578.0
AM Peak		*		*		0700		0700		0700		1100		1100			
AM reak		*		*		374		434	'	410		469		238			
						J/1		TUT		-1 + 4		102		250			
PM Peak		*		*		1600		1700		1600		1300		1500	İ		
III I CUA		*		*		614		586		621		499		320	;		
						V				•							

<sup>\* -</sup> No data.

TeeklyVehicle-796

site: 09-024d.0WE

Description: Boices Lane - Just East of Dalewood St

Filter time: 13:00 Tuesday, April 28, 2009 => 14:00 Wednesday, May 06, 2009

Scheme: Vehicle classification (Scheme F2)

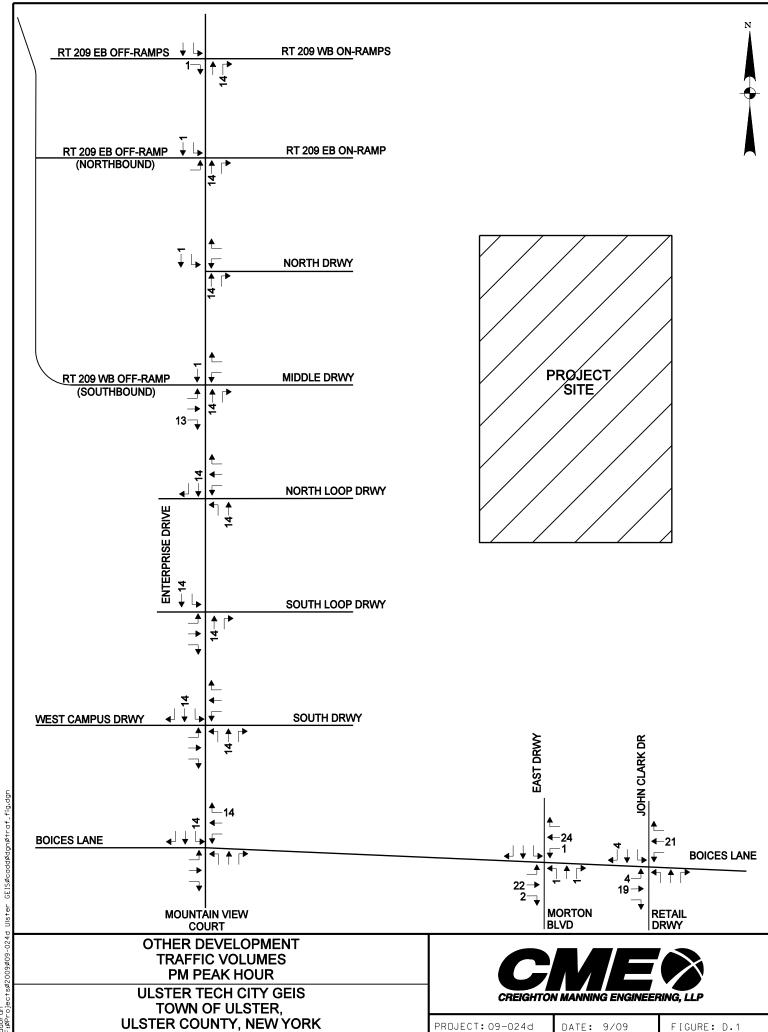
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13 ) DirBA(W) Sp(5,100) Sep(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	04 May	05 May	06 May	07 May	08 May	09 May	10 May	1 - 5	1 - 7
Hour							1		
0000-0100	14	21	15	*	*	*	*	16.7	16.7
0100-0200	8	5	5	*	*	*	*	6.0	6.0
0200-0300	7	14	10	*	*	*	*	10.3	10.3
0300-0400	5	7	2	*	*	*	*	4.7	4.7
0400-0500	4	6	10	*	*	*	*	6.7	6.7
0500-0600	49	59	50	*	*	*	*	52.7	52.7
0600-0700	186	165	163	*	*	*	*	171.3	171.3
0700-0800	396<	399<	394<	*	*	*	*	396.3<	396.3<
0800-0900	281	309	282	*	*	*	*	290.7	290.7
0900-1000	235	241	250	*	*	*	*	242.0	242.0
1000-1100	272	273	305	*	*	*	*	283.3	283.3
1100-1200	316	328	353	*	*	*	*	332.3	332.3
1200-1300	408	458	428	*	*	*	*	431.3	431.3
1300-1400	444	424	425	*	*	*	*	431.0	431,0
1400-1500	460	441	*	k	*	*	*	450.5	450.5
1500-1600	52 <b>0</b>	486	*	*	*	k	*	503.0	503.0
1600-1700	580<	525	*	k	*	*	*	552.5<	552.5<
1700-1800	537	555<	*	*	*	*	*	546.0	546.0
900-1900	394	349	*	*	*	*	*	371.5	371.5
900-2000	289	286	*	*	*	*	k	287.5	287.5
2000-2100	228	209	*	×	*	*	*	218.5	218.5
2100-2200	130	128	*	*	*	*	*	129.0	129.0
2200-2300	61	87	*	*	*	*	*	74.0	74.0
2300-2400	38	25	k	k	*	*	*	31.5	31.5
Totals								l   	
0700-1900	4843	4788	*	*	*	*	*	4830.5	4830.5
0600-2200	5676	557 <b>6</b>	*	*	*	*	*	5636.8	5636.8
0600-0000	5775	5688	*	k	*	*	*	5742.3	5742.3
0000-0000	5862	5800	*	*	*	*	*	5839.3	5839.3
AM Peak	0700	0700	0700	*	*	*	*	! 	
	396	399	394	*	*	*	*		
PM Peak	1600	1700	<b>±</b>	*	*	*	*	•	
	580	555	*	*	*	*	*	l	

<sup>\* -</sup> No data.

# Appendix D – Other Development Traffic Volumes

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York



PROJECT: 09-024d

FIGURE: D.1

# **Appendix E – Multi-Use Trip Credit**

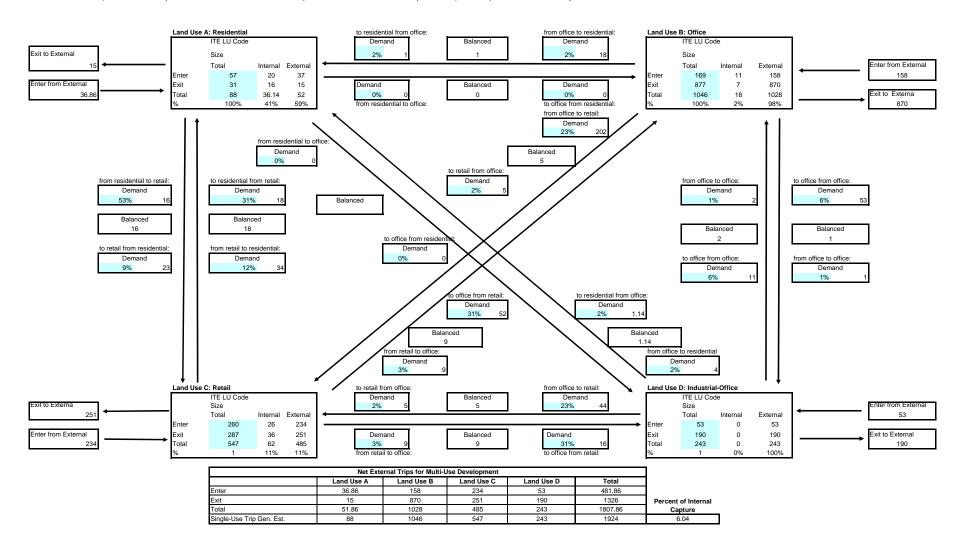
Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

Project: Ulster Tech City
Calc by: MDN Date:
Checked by: Date:

/11/2009



How to use this worksheet: 1) Save as this worksheet into your project directory and enter the header information of this sheet. 2) Calculate the total trip gen for each use and enter it in each land use box. 3) Enter the internal capture rates for the land uses based on the time period selected. The default is the PM peak hour. 4) internal capture rate will automatically be calculated.



# **Appendix F – Level of Service Analysis**

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

#### **LOS Definitions**

The following is an excerpt from the 2000 Highway Capacity Manual (HCM).

#### **Level of Service for Signalized Intersections**

Level of service for a signalized intersection is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. Levels of service are defined to represent reasonable ranges in control delay.

- **LOS A** describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay.
- **LOS B** describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
- **LOS C** describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
- **LOS D** describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
- **LOS E** describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.
- **LOS F** describes operations with control delay in excess of 80 s/veh. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also be contribute significantly to high delay levels.

#### **Level of Service Criteria for Unsignalized Intersections**

Four measures are used to describe the performance of two-way stop controlled intersections: control delay, delay to major street through vehicles, queue length, and v/c ratio. The primary measure that is used to provide an estimate of LOS is control delay. This measure can be estimated for any movement on the minor (i.e., stop-controlled) street. By summing delay estimates for individual movements, a delay estimate for each minor street movement and minor street approach can be achieved. The level of service criteria is given in Exhibit 17-2/22.

For all-way stop controlled (AWSC) intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through an AWSC intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

Exhibit 17-2/22: Level-of-Service Criteria for Stop Controlled Intersections

Level of Service	Control Delay (sec/veh)
А	≤ 10.0
В	>10.0 and <u>&lt;</u> 15.0
С	>15.0 and <u>&lt;</u> 25.0
D	>25.0 and <u>&lt;</u> 35.0
Е	>35.0 and <u>&lt;</u> 50.0
F	>50.0

Agency/Co.   CME, ENT199WBONexpm   Date Performed   6/18/2009   Analysis Time Period   PM Peak Hour	·	· · · · · · · · · · · · · · · · · · ·	
Agency/Co.   CME, ENT199WBONexpm   Date Performed   6/18/2009   Analysis Time Period   PM Peak Hour   Project Description   09-024d, Ulster Tech City   EastWest Street: Route 199 WB On Ramp   North/South Street: Enterprise Driv Intersection Orientation: North-South   Study Period (hrs): 0.25			
Date Performed   B/18/2009   Analysis Time Period   PM Peak Hour   Project Description   09-024d, Ulster Tech City			Rt 199 WB O
Analysis Time   Period   PM   Peak   Hour   Project Description   09-024d, Uister Tech   City		own of Ulstei	, NY
Project Description	2009	009 Existing	-
Street			
North-South   Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments		Drive	
Major Street	)		
Movement		•	
Colume (ven/h)	Sout	outhbound	
Volume (veh/h)		5	6
Peak-Hour Factor, PHF		Т	R
Hourly Flow Rate, HFR   O	<del></del>	248	
Veh/h    0		0.66	1.00
Median Type	;	375	0
RT Channelized			
Configuration			
Configuration			0
Distream Signal   O		1	0
Minor Street			
Movement   7		0	
L   T   R   L	Wes	Vestbound	
Volume (veh/h)		11	. 12
Peak-Hour Factor, PHF         1.00		Ŧ	R
Hourly Flow Rate, HFR			£
(veh/h)         0         0         0         0           Percent Heavy Vehicles         0         0         0         0           Percent Grade (%)         0         0         0         0         0           Flared Approach         N         0		1.00	1.00
Percent Heavy Vehicles		0	0
Storage		0	0
Storage		0	
Storage         0           RT Channelized         0           Lanes         0         0         0           Configuration         0         0         0           Delay, Queue Length, and Level of Service         0         0         0           Approach         Northbound         Southbound         Westbound           Movement         1         4         7         8         9         10           Lane Configuration         LT         0		N	
RT Channelized		0	
Lanes         0         0         0         0           Configuration         Delay, Queue Length, and Level of Service         Westbound           Approach         Northbound         Southbound         Westbound           Movement         1         4         7         8         9         10           Lane Configuration         LT   <	$\neg \vdash$	<del>-</del>	0
Configuration         Delay, Queue Length, and Level of Service           Approach         Northbound         Southbound         Westbound           Movement         1         4         7         8         9         10           Lane Configuration         LT         V(veh/h)         128         V </td <td><del></del></td> <td>0</td> <td>0</td>	<del></del>	0	0
Delay, Queue Length, and Level of Service           Approach         Northbound         Southbound         Westbound           Movement         1         4         7         8         9         10           Lane Configuration         LT		<u> </u>	J
Approach         Northbound         Southbound         Westbound           Movement         1         4         7         8         9         10           Lane Configuration         LT <td< td=""><td></td><td></td><td><u> </u></td></td<>			<u> </u>
Movement 1 4 7 8 9 10  Lane Configuration	<del></del>	East	bound
Lane Configuration         LT           v (veh/h)         128           C (m) (veh/h)         1121           v/c         0.11           95% queue length         0.39           Control Delay (s/veh)         8.6			
v (veh/h)     128       C (m) (veh/h)     1121       v/c     0.11       95% queue length     0.39       Control Delay (s/veh)     8.6	<u>'   1</u>	10	11 12
C (m) (veh/h) 1121			
v/c         0.11           95% queue length         0.39           Control Delay (s/veh)         8.6			
95% queue length			
Control Delay (s/veh) 8.6			
Control Delay (s/veh) 8.6			
	_		L
Approach Delay (s/veh) Approach LOS			

Copyright © 2007 University of Florida, All Rights Reserved

HCS+TM Version 5.3

	٦	<b>→</b>	•	•	←	*	4	<u>†</u>	<i>&gt;</i>	<b>/</b>	↓ ·	4
Movement 3	EBL	EBT-	EBR	WBL	WBT	WBR	NBL	NBT	NBR.	- <b>S</b> BL	SBT	SBR
Lane Configurations	14.54							<b>^</b>			ቀ↑₽	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	14	12	12	12	12	12	14	12	12	12
Total Lost time (s)	4.0					•	1	4.0			4.0	
Lane Util. Factor	0.97							0.95			0.95	
Frt	1,00			٠				1.00			1.00	
Flt Protected	0.95							1.00			0.99	
Satd. Flow (prot)	3735		•.					3574			3557	
Flt Permitted	0.95							1.00			0.83	
Satd. Flow (perm)	3735	* .						3574	1 (2)		2975	<u> </u>
Volume (vph)	103	0	0	0	0	0	0	699	0	36	265	0
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92		-0.81		0.81		0.90	0.90
Adj. Flow (vph)	123	0	0	0	0	0	0	863	. 0	40	294	0
RTOR Reduction (vph)	0	0	0	.0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	123	0	0	0	0	0	0	863	0	0	334	0
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	1%	2%	0%	1%	2%
Turn Type	Prot									Perm		
Protected Phases	v. <b>4</b>				1 1	2.19		<b>2</b> ·	र्भोद्दर्भ हैं ।		- 6	Ţ ¥.
Permitted Phases						, .				6		. •
Actuated Green, G (s)	8.0				3 - 7			32.6			32.6	
Effective Green, g (s)	10.0							34.6			34.6	
Actuated g/C Ratio	0.19						Sall fair	0.66			0,66	with the
Clearance Time (s)	6.0	_						6.0		_	6.0	
Vehicle Extension (s)	271 F. 100 C. 100 N. 1	o de la lacturação de la compansión de la compansión de la compansión de la compansión de la compansión de la La compansión de la compa		ۇرى <u>نۇرانىڭىنى</u> نى	يتدعشا شية	سريوندرستان آ سريوندرستان آ		<u></u>	Marca primi		3.0	القريس الم
Lane Grp Cap (vph)	710							2351			1957	
v/s Ratio Prot	c0.03	n GJA						c0.24	Application of the second			
v/s Ratio Perm											0.11	
v/c Ratio	- 0.17	٠,			1 (1)			0.37		1	0.17	1.14
Uniform Delay, d1	17.8							4.1			3.5	
Progression Factor	1.00	, site of	inera e jiri.	7.0				1.00	in a Section		1.00	ri <sup>lo</sup>
Incremental Delay, d2	0.1							0.1			0.0	
Delay (s)	18.0	11 1	No. Page 1	1.4	··· . ·	:	50,	4.2		i i	3.5	
Level of Service	В							Α.			, A	
Approach Delay (s)	#HRE	18.0		1	0.0		, Z <sub>2</sub>	4.2		*: * J	3.5	- 575
Approach LOS		В			Α			Α			Α	
Intersection Summary				SILEN OF			ų žietų i					
HCM Average Control E			5.3	ı	ICM Le	vel of S	ervice		A			
HCM Volume to Capaci		ă.	0.32	4. <u>1</u> .				. 1	_			
Actuated Cycle Length			52.6		Sum of I				8.0			
Intersection Capacity U	tilization		45.2%	1	CU Lev	el of Se	rvice	41	Α			
Analysis Period (min)			15									
c Critical Lane Group												

	€	*	†	<b>/</b>	<b>/</b>	<b>+</b>					
Movement	WBL	WBR	NBT	NBR	SBL	SBT	<u></u>			Taris DEL	<u>.</u>
Lane Configurations	ሻ	7	<b>∱</b> ↑		*	ቀቀ					<del></del>
Sign Control	Stop		Free			Free					
Grade	0%		0%			0%					
Volume (veh/h)	2	9	839	.2	3	262					
Peak Hour Factor	0.50	0.50	0.75	0.75	0.90	0.90					
Hourly flow rate (vph)	4	18	1119	3	. 3	291			*		
Pedestrians											
Lane Width (ft)				* -		$A = \frac{1}{2} \left( \frac{1}{2} \right)$					
Walking Speed (ft/s)											
Percent Blockage		5.							-		•
Right turn flare (veh)											
Median type	None				* *	± 4 %			3 "	编。"是一	1 / C
Median storage veh)											
Upstream signal (ft)						721		•			
pX, platoon unblocked		. د د									
vC, conflicting volume	1272	561		1	1121	43 F 4		- 1		4-20	
vC1, stage 1 conf vol											
vC2, stage 2 conf vol	1070		er i seğelele	de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la					11 -11 -444	ri di dia mining	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
vCu, unblocked vol	1272	561	mai whi	5 (F. 6)	1121	Selfe de Francis III de	142 1444		. د و هاور د		
tC, single (s)	: B.B.	7.3			4.8					되고 등록 기다	
tC, 2 stage (s)	in Artis		January 1 a Ari	e estat i	ാത്ത്ത്ത്	aga ngga in	+ +13224	,	. at Justina	1.35 v a	
(F (s)	3.5	C= 7,5			2.5		#+ \$t				
p0 queue free % cM capacity (veh/h)	98 161	96 424	1.1.4 + 1	o solitara	99	suint effail.	.≤	21	** *	:	te i i
civicapacity (venin)	101	424		garantering an Andrews States and American	407		an an and an an	12			
Direction, Lane#	WB_1	-WB 2	NB4	NB 2∹	SB-1	SB 2	SB 3		Add the PINE LEAD OF THE		
Volume Total	4	18	746	376	3	146	146				Ca Tark
Volume Left	4	0	0	0	3	0	0				
Volume Right		18	0	3	0	0	0		Francisco C	English State	a
cSH	<b>1</b> 61	424	1700	1700	467	1700	1700				
Volume to Capacity	0.02		0.44	0.22	0.01	0.09	0.09	4.0	القويد : د - الأولى		No all
Queue Length 95th (ft)	2	3	0	0	1	0	0				
Control Delay (s)	27.9	13.9	0.0	0.0	12.8	0.0	0.0				
Lane LOS	D	В			В						
Approach Delay (s)	- 16.4	1.00	0.0	of Mark	0.1	s 10 10.		F	A	minus in the	
Approach LOS	С										
Intersection Summary	Entra Programme			inskiibalis valuista					Sektude er siet Skiederske		
Average Delay			0.3								<u> </u>
Intersection Capacity Ut	ilization		33.3%	IC	CU Lev	el of Ser	vice		Α		
Analysis Period (min)			15								

	۶	<b>→</b>	7	•	<b>←</b>	*	4	†	<i>&gt;</i>	<b>/</b>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL:	NBT	NBR	SBL-	SBT	⊩ SBR
Lane Configurations		₳			4			<b>∱</b> 1→			<b>个个</b>	
Sign Control		Stop		*.	Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	- 0	1	0	-2	0	2	0	839	0	0	264	. 0
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	2	0	4	. 0	4	. 0	1119	.0	0	293	.0
Pedestrians												
Lane Width (ft)								11.01			Ş Ş	
Walking Speed (ft/s)												
Percent Blockage			v .					,				
Right turn flare (veh)										•		
Median type		None		选进	None			90 St. 1		1 1 1 1 N		
Median storage veh)												
Upstream signal (ft)					1.12			1281	1000		1114	:
pX, platoon unblocked								•				
vC, conflicting volume	857	1412	147	1266	1412	559	293	7. Kg),	us din	1119	4	e garage
C1, stage 1 conf vol									٠			
C2, stage 2 conf vol			Hajirin	, a. E.,	4	4 3					3,43	2 13
vCu, unblocked vol	857	1412	147	1266	1412	559	293			1119	e 1,000	
tC, single (s)	7.5	6.5	6.9	8,5	6.5	6.9	4.1					
tC, 2 stage (s)			3 14 <del>5</del>	. 444			1997 2 511				, , ,	
t <b>F</b> (s)	3.5	4.0	3.3	4.0	4.0	3.3	2.2		ega 4	2.2		e Hazik
p0 queue free %	100	99	100	95	100	99	100	e, we'll make		100		
cM capacity (veh/h)	249	139	874	83	139		1265	\$ 1. <del>2</del> 1		620	and the	i je
	EB1	a como arrecolousque				- SB 2-	nieta		randini. Randini	regeren. Perusakan	e en skirker. Senskirker	* (12.12.22)
Direction; Lane #		WB 1.	NB 1 746	NB 2 373	SB-1 147	≝യല∠- 147						
Volume Left	ि <del>≩</del> इक्षेप्र 0	4	, <del>(40</del> 0	0 319	0 ∵r <del>ā</del> i	0	. 366	1 × 81.11				F
	0		0	_	- 0	_	ا دروم اردی	₩.			- A	4. 18 4 %
Volume Right cSH	139	4 142	1700	1700	1700	1700						74 No. 3
	0.01	0.06	0.44			0.09	*	ing Take	28.2			er dan in
Volume to Capacity	⊕.⊎1 1	4		0	0.09	0.09	ž.		10.00		· .	
Queue Length 95th (ft)	-	-	_	-	_	_						
Control Delay (s)	31,2	31,9 O	0.0	0.0	u.u	U.U		-	•	1 21		
Lane LOS		U	0.0	44 July 2015	- a a			2.2		7.41	1	e d = 1
Approach Delay (s)	: \@1.2	_	0.0	1 ct 2 1 1	U.U	= -14-11				***		
Approach LOS	D	D										
Intersection Summary	iinib Tara, 3						Lagaret Lagaret			yair i		ir Viig
Average Delay			0.2									
Intersection Capacity Uti	ilization		33.2%	]	CU Lev	el of Se	rvice	. "	A			
Analysis Period (min)			15		*							

	ሻ	<b>†</b>	<b>↓</b>	J	4	<b>\</b>					
Movement	NBL	NBT	SBT	SBR	SEL	SÉR	are engliser.	4. 1.			
Lane Configurations		<b>ተተ</b>	ቀቀ			7					
Sign Control		Free	Free		Yield						
Grade		0%	0%		0%						
Volume (veh/h)	,0	839	266	0	0	285	7			•	
Peak Hour Factor	0.75	0.75	0.90	0.90	0.84	0.84					
Hourly flow rate (vph)	0	1119	296	0	:0	339					
Pedestrians			4								
Lane Width (ft)							•				
Walking Speed (ft/s)											
Percent Blockage	` .				¥.				•	•	
Right turn flare (veh)					<b>-</b> -23-21						
Median type	* *			٠. ٦	Raised		**************************************	:			
Median storage veh)		4000	4000		0						
Upstream signal (ft) pX, platoon unblocked	. *	1096	1299	•	0.96	`.		•	· .		
vC, conflicting volume	296					148					
vC1, stage 1 conf vol	230		4 * -	-	296	140			* +	3,	
vC2, stage 2 conf vol			gartini ju	1 3 63	559	. 9.1 <b>1</b>		ė	. eye e ê ir e	() (항: 항:5)	
vCu, unblocked vol	296	, \$F &	DV # 3 17 . +	10,000	803	148		19 40 8	, 177 m/m	regard to the	4,400,000
tC, single (s)	4.1					6.9			- 100cg		87° 31
tC, 2 stage (s)	ALMERICAN	The State of the S			5.8	Sec. 2171	A post page 1 and 1 and 1 and 1	and the state of	1.0	रीक्ष ≑हीं केर. -	\$ Anna Gay
tF (s)	2.2				3.5	3.3	- 경우화님				
p0 queue free %	100		****		100	61	*** * . *			27.	· · · · · · · · · · · · · · · · · · ·
cM capacity (veh/h)	1263		ildr of	. <u>Ž</u> . Ma	315	876		المنطق المناسب		A BOLET	38
Direction, Lane#	ENB1	NB 2	SB 1	SB2	CE4						
Volume Total	559	in thinks and the la	148		320				4.3.		
Volume Left	0	့ ၁၁၅			့ -၁၁ <del>၁</del> ၁		병원 및 기계 그림은 경기				
Volume Right	-0 -0	0	0		. 339	. #		** :	4.	No.	
cSH	1700	1700	1700	1700	876		te de la la companya de la companya de la companya de la companya de la companya de la companya de la companya		Albin e jelov		
Volume to Capacity	0.33		0.09		0.39		en en en en en en en en en en en en en e		1.5	Seer Jedit	er oggi i tij
Queue Length 95th (ft)	0	0	0	0.00	46						- 5 - 1, 5 - 5 - 5
Control Delay (s)	0.0	_	0.0	_	-11.7		an Alberta	- 7%	· 54.	200	1.410 - 1
Lane LOS	77.5			3-4-	В				111		
Approach Delay (s)	0.0		0.0		1117	ob jo	ost (gr. o. ii)		agriculation		1. 真圆头4
Approach LOS					В			,	*		*
Intersection Summary	a <u>Letinel Distri</u> blich	1 <u>0-1754, 54-5</u>		<u> </u>	. Proting til state i	ANGLES IN THE	<del>Parallediatio</del> ski ret	Law <del>ai</del> e V		eta ar kilar dan	ni'nibus felelik :
	to Atlanta		0 0					£ 45 K - A		<u> 15 (r. 2874-)</u>	
Average Delay Intersection Capacity U	Hilization		2.3	i	CHUSS	of of Sa	nuico		Λ.		
Analysis Period (min)	unzauon		31,4% 15	- !	CO FeA	el of Se	yice		Α	* + + + + + + + + + + + + + + + + + + +	* * * •
			ı								
						٠.	•				•

	•				4-	4	•	*		\_		1
and the second of the second o		<b>→</b>	<b>*</b>	<b>∳</b>	. اسم شار قادر		.,/	 	<i>,</i>		<b>*</b>	· •
Movement	EBL	EBT	EBR	WBL		WBR	NBL		∗ NBR	SBL		SBR
Lane Configurations					- ↔			_4↑♠			<b>↑</b> }	
Sign Control		Stop			Stop			Free			Free	*.
Grade	_	0%			0%		_	0%	_	_	0%	_
Volume (veh/h)	0	0	0	1-	0	1	. 2	838	-0	0	551	0
Peak Hour Factor	0.92	0.92	0.92	0.50	0.50	0.50	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	:0	2	0	2	3	1117	0	0	612	. 0
Pedestrians		-										
Lane Width (ft)	* - * * *		1			4 5 T						
Walking Speed (ft/s)							-				1.	.5
Percent Blockage	a tar						Ť.				•=	÷ \$1
Right turn flare (veh)		KT .			AVENUE.						-	
Median type		None	-		None		•	200	: 1			
Median storage veh)				31.45				700		-79		
Upstream signal (ft)	0.00	0.00		0.00	0.00	0.00	* **	788		0.00		-
pX, platoon unblocked	0.93	0.93	്ര്വര	0.93	0.93	0.93	640			0.93		4
vC, conflicting volume	1178	1/35	306	1429	1730		612		1.0	1117		
vC1, stage 1 conf vol	وموافي دوي رزوان		reger (J.)	100	rija jesto.	Jakon Ja	r a librete		14.115	<b>~</b> !		, N.S.
vC2, stage 2 conf vol vCu, unblocked vol	1119	1716	306	1388	1716	456	612		7 TA 64 T	1054	the state of the	
tC; single (s)				7.5		6.9		alite da k	North Edition	4.1	amirumv	. 5 Ct.
tC, 2 stage (s)	्राप्त्र सम्बद्धाः इ.स.च्या	<u></u>		- ं द्विष्ट	. J. U.S.	ું. છે. જુ			and the second	in afficially		Trib pur
tF(s)	3.5	4.0	ં વવ	3.5	4.0	- ેવવ	2.2		46	2.2	e e e sand	STEER
p0 queue free %	100	100	100	98	100	100	100	The Time of		100		
cM capacity (veh/h)	= 3150 ∂	- 83	690	97	83.	520	977	2	garago (jud	612		
	A Maria Caracter Communication	era	Agentical Control of the addition.	The same of the sa	whomble desired	::::::::::::::::::::::::::::::::::::::				<b></b>	er e entretterin	
Direction, Lane #	WB 1	NB 1	NB 2	SB_1	SB-2		19727 25 5.3		15.142 Chang	A CL	Signatura (France) CLOS January (France)	in the same
Volume Total	4.	Same against a section of	- 745	408					유민 경기		<b>深度[7]</b>	
Volume Left	2	3	0	0	0							
Volume Right		ે ૄ <b>ે</b> 0	11		0	a Har II				tiring.	fil i fa <sup>ll</sup>	
cSH	163	977	1700	1700	1700						*	
Volume to Capacity			0.44		0.12	Parent			PFI + N			lar i
Queue Length 95th (ft)	2	0	0	0	0	·				1 1		
Control Delay (s)	2/.6	· 0,1	0.0	0.0	0.0			3 w"	-1 -12 ·	* .		
Lane LÓS	U O T O	A	1		to the second			. 43 1		2 1 22		
Approach Delay (s)	_	0.0		0.0	두 생각하			* * * · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		(Fig. )
Approach LOS	D											
Intersection Summary	ialite City California			er vetele Rozafik						igaminish Amerikan		
Average Delay			0.1									
Intersection Capacity U	tilization		34.6%	.1	CU Lev	el of Se	ervice	4	A	***	- ' '	
Analysis Period (min)			15									
				: :								5
•												

	•	_			+	4	*	*	<i></i>	1	ı	
and a second second second second second second second second second second second second second second second	·	<b>-</b>	*	<b>♥</b>			7	 	7	7	<b>†</b>	<b>.</b>
Movement	FRE	EBT	EBR	MRL	MB1	WBR	NBF		NBK	SBL	SBT	SBR
Lane Configurations		_ ↔						-↑Դ-		-	_41↑	
Sign Control		Stop			Stop			Free			Free	
Grade		0%	_		0%	_	_	0%			0%	_
Volume (veh/h)	1	0	0	0	: 0	0	0	839	1	0	552	0
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.92	0.75	0.75	0.90	0.90	0.92
Hourly flow rate (vph)	2	0	0	0	0	0	0	1119	1	0.	613	0
Pedestrians												
Lane Width (ft)		÷				*					•	
Walking Speed (ft/s)								_				
Percent Blockage		• •					¥					5
Right turn flare (veh)					2.51							
Median type		None		1.1	None					2 :		
Median storage veh)	2.90				1 44						, .	
Upstream signal (ft)								501				
pX, platoon unblocked	0.90	0.90	207	0.90	0.90	0.90				0.90		
vC, conflicting volume	- :11/3	1/33	307	1426	1733	560	613			1120		
vC1, stage 1 conf vol	5 - 6 5 5			n julian min		ان الاحماد الوات	nien udarelia i				. , .	
vC2, stage 2 conf vol		4705	207		4704	**************************************	. 4.7	eria di Nadio e	e service	4000	in all a	
vCu, unblocked vol	1084	1705	307	1364	1704	406	613			1026	چىلەرە ئوللەرە	"Simulation"
tC, single (s) tC, 2 stage (s)		6.5	6.9	7.5	્	- 6.9	4,1		19. Apr. 1920 at	4.1		
tF (s)	3,5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		- 35
p0 queue free %	99	100	100	100	100	100	100			100		
cM capacity (veh/h)	157	82	695	<u>96</u>	82	- 537	962	- William III. Grand Follows H	Alma alhan	619		
Direction, Lane #	EB1	NB1	NB-2	- SB 1	. SB 2				erejy.		BELLET ONLY THE TOTAL THE	
Volume Total	2	746	374	204	409					April 1		
Volume Left	2	Õ	0	0	Õ				,			
Volume Right	. 0	0	. H. H.	0	0		ltri i		÷	1.54		
cSH	157	1700	1700	619	1700							
Volume to Capacity	0.01	0,44	0.22	0.00	0.24		- <del>*</del>	. *		ni Ağır.		7-1
Queue Length 95th (ft)	1	0	0	0	0							
Control Delay (s)	28.2	0.0	0.0	0.0	0.0				1.15	Marine Company		1,1-1
Lane LOS	D											
Approach Delay (s) Approach LOS	,28,2 D	0.0		0,0	A Va Tabley ・ ない					11.0		
Intersection Summary	7: M : . T : . T : . M :					Marin Janes y ok						fris Eris
Average Delay			0.0									
Intersection Capacity U	tilization		33.2%	:	ICU Lev	el of Se	rvice	• .	Α		and the second	
Analysis Period (min)			15									
			*. •							*		

	۶	<b>→</b>	*	€	<b>←</b>	*	*	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	-√
Movement 1	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<del>-</del>	7		₩			<b>∱</b> ↑		ሻ	<u></u> ↑1>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	11	11
Total Lost time (s)		4.0	4.0		4.0	* * * *		4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00			0.95		1.00	0.95	
Fit		1.00	0.85	•	0.93			1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.98			1.00		0.95	1.00	
Satd: Flow (prot)	1 1	1760	1776	:	1724	- 33		3569	* .:*.	1685	3444	
Fit Permitted		0.79	1.00		0.81			1.00		0.29	1.00	
Satd. Flow (perm)		1456	1776	1.	1436		v =	3569	11- 1	521	3444	1.1.1
Volume (vph)	38	1	23	19	0	21	0	781	9	4	535	13
Peak-hour factor, PHF	0.50	0.50	0.50	0.50	0.50	0.50	₹0.87	0.87	0.87	0.86	0.86	0.86
Adj. Flow (vph)	76	2	46	38	Ó	42	0	898	10	5	622	15
RTOR Reduction (vph)	0	0	38	0	35	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	78	8	0	45	0	0	907	Ô	5	635	0
Heavy Vehicles (%)	3%	- 0%	0%	- 0%	0%	- 0%	0%	1%	- 0%	0%	1%	_0%
Turn Type	Perm		Perm	Perm						Perm		
Protected Phases		- 4			8		Section 2	2			6	
Permitted Phases	4		4	8						6		
Actuated Green, G (s)	다는 가장	7,7	7.7		7.7			35,5		35.5	35.5	12.14
Effective Green, g (s)		9.7	9.7		9.7			37.5		37.5	37.5	•
Actuated g/C Ratio		0.18	0.18	1991 NE	0.18			0.68	4 + 25	0.68	0.68	
Clearance Time (s)		6.0	6.0		6.0			6.0		6.0	6.0	
Vehicle Extension (s)	taring and the second	3.0	3.0	ora regentation g	3.0			3,0		<b>3.0</b>	3.0	and the state of the
Lane Grp Cap (vph)		256	312		252			2425		354	2340	
v/s Ratio Prot	A - 3 - 3:							c0.25	e i hezi		0.18	a di
v/s Ratio Perm		c0.05	0.00		0.03					0.01		
v/c Ratio		0,30	0.03		0.18			0.37		0.01	0.27	
Uniform Delay, d1		19.8	18.8		19.4			3.8		2.9	3.5	
Progression Factor		1,00	1.00		1.00		37	1.00		1,00	1.00	41.134.2
Incremental Delay, d2		0.7	0.0		0.3			0.1		0.0	0.1	
Delay (s)		20.5	18.9	100	19.7			3.9		2.9	3.5	
Level of Service		С	В		В			A		Α	Α	
Approach Delay (s)	es de la company	19.9		1.0	19.7		į.	3.9			- 3.5	1. 1. 1.
Approach LOS		В			В			Α			Α	
Intersection Summary				- 578 489				sia viet				1 2 3
HCM Average Control [	•		5.6		HCM Le	vel of S	ervice		А			
HCM Volume to Capaci			0.36					•	* .			
Actuated Cycle Length			55.2			lost time			8.0			
Intersection Capacity U	tilization		37.5%		ICU Lev	el of Se	rvice		, A			
Analysis Period (min)			15									
c Critical Lane Group	* \$ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				•							

	٠	<b>-</b>	7	<b>√</b>	4	*	•	<b>†</b>	<b>/</b>	<b>\</b>	<b>↓</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT.	NBR	≟SBL -	SBT	SBR
Lane Configurations	*	ĵ»			€	74		4		<b>¥</b> 5	ĵ»	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	•	4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
<b>Frt</b>	1.00	1.00	:		1.00	0.85		0.90		1,00	0.88	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1624	1835	* .		1845	1812		1935		1787	1616	
FIt Permitted	0.43	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		1835		·	1845	1812		1935	·	1787	1616	<u> </u>
Volume (vph)	193	177	1	0	67	596	0	1	2	558	4	15
Peak-hour factor, PHF	0.54		0.54	0.93	0.93	0.93	0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	357	328	2	0	72	641	Ō	1	3	613	4	16
RTOR Reduction (vph)		. 0	0	0	. 0	0	0	3	0	0	9	0
Lane Group Flow (vph)		330	0	0	72	641	0	1	0	613	11	0
Heavy Vehicles (%)	0%	0%	0%	0%	3%		<del> </del>	0%	0%	1%	- 0%	0%
Turn Type	pm+pt			pm+pt		Free	Split			Split		
Protected Phases	1. 1. 7.	4		3	. 8		2	2	in the		1	원국
Permitted Phases	4	· nc a d	~	. 8	2004 N. L. 1	Free				Sinii Si	Links Ses	1.76
Actuated Green, G (s)	20.2	3.44 3.54 E 2				66.9		0.5		28.2		
Effective Green, g (s)	22.2	22.2			6.3	66.9	_ =	2.5		30.2	30.2	
Actuated g/C Ratio	0.33	0.33	. 1 %		0.09	1.00		0.04		0.45	4 4 4	1 1 1 m
Clearance Time (s)	6.0	6.0			6.0	Selve ise sis .	i e siji	6.0		6.0	6.0	
Vehicle Extension (s)	3,0	3.0	- Andreas - Company - Comp	فليوسف سياها	3.0.		his contract to the	3.0	ย ประเทศได้เลื่องเหติ	3.0	3.0	
Lane Grp Cap (vph)	403	609		٠	174	1812		72		807	729	V 10 10 1
v/s Ratio Prot	c0.16	0.18	ta istori		0.04	-		0.00	. 1997	c0.34	0.01	
v/s Ratio Perm	c0.14	O:E4		٠. ـ ـ	S and Ald	c0.35	r gr	0.00		0.76	ିର ବର	. 1
v/c Ratio	0.89	0.54		- 1	0.41 28.6	0.35		0.02 31.0		0.76	0.02	
Uniform Delay, d1 Progression Factor	19.5 1.00	18.2 1.00				0.0		1.00		15.3 1.00	10.1 1.00	
Incremental Delay, d2	20.1	1.0			1.6	0.5		0.1		4.1	0.0	3 (14 )
Delay (s)		1.0 19.2		:	30.2		-	31.1		19.5	10.1	Žerje e e
Level of Service	D	B			30,2 C			C		В	В	
Approach Delay (s)					3.5			31.1			19.2	1811
Approach LOS		. 29.0 C			Δ.			043/1 C		<del></del>	B	
Intersection Summary					n in a fille fait.	acoesas, r	Kasaria,	erikana. Natahan		Landonia e femin		ranciac de Si
HCM Average Control		* <u>a m 4 . 7 ()</u>	17.3			evel of S	envice		В			Time thefas
HCM Volume to Capac	•		0.75		LICIVI LE	3VEI 0I 3	CI VICE					
Actuated Cycle Length			66.9		Sum of	lost time	: a (e)		8.0			
Intersection Capacity L			61.6%			el of Se			6.0 B			
Analysis Period (min)	inzation		15		IOO EGV	ان ان ان	v AICÉ		, 0			
c Critical Lane Group	<b>.</b>					1000						
C Chillean Fame Cloub	Z 1 ** 1.	:										

	۶		7	•	←-	4	4	<b>†</b>	<b>/</b>	<b>\</b>	<b>↓</b>	4
Movement	s EBL	EBT	- EBR	WBL	·WBT	-WBR	- NBL	NBT	⊌NBR.	∳ SBL₌	≕SBT-	⊴SBR
Lane Configurations		<b>€</b> Î	7	ሻ	*	77		र्स	7.7	14	↑,	
Ideal Flow (vphpl)	1900	1900	1900	1900	1.900	1900	1900	1900		1900	1900	1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)		4.0	4.0	4.0	4.0		-	4.0	4.0	4.0	4.0	1 L
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	
Frt (1978)		1:00	0.85	1.00	1.00			1.00	0.85	1.00	1.00	12.0
Fit Protected		1.00	1.00	0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	· N	1756	1492	1624	1693			1673	1561	1491	1837	.* s <sub>1</sub>
Flt Permitted		1.00	1.00	0.15	1.00			0.45	1.00	0.62	1.00	
Satd. Flow (perm)	u dát	.1756	1492	253	1693			785	1561	966	1837	$ p_{i_1 \ldots i_r i_r}$
Volume (vph)	0	402	311	168	299	0	294	2	207	6	4	0
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0.89	0.89	0.92	0.92	0.92	0.50	0.50	.0.50
Adj. Flow (vph)	0	502	389	189	336	0	320	2	225	12	8	Ô
RTOR Reduction (vph)	0	0	174	· • • • • • • • • • • • • • • • • • • •	0	0	Ò	0	79	0	0	0
Lane Group Flow (vph)	0	502	215	189	336	0	0	322	146	12	8	Ö
Heavy Vehicles (%)	0%	~ 1%	1%	0%	1%	- 0%	1%	- 0%	- 0%	-17%	- 0%	- 0%
Turn Type	Perm		pm+ov	pm+pt		Perm	pm+pt		pm+ov	Perm		
Protected Phases		- 6	3	5	- 2		see the control of the control	- √ 8	5	L L	. 4	of fra 1
Permitted Phases	6		6	2		2	8		8	4		-,
Actuated Green, G (s)		21.9	36,8	36.4	36.4		i kali	25.4	33,9	4.5	4.5	
Effective Green, g (s)		23.9	40.8	38.4	38.4			27.4	37.9	6.5	6.5	
Actuated g/C Ratio		0.32	0.55	0.52	0.52		FTAN	0.37	0.51	0.09	0.09	
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	ું .3.0	3.0	3.0	ù da		3.0	3.0⊡	3.0	3.0	Samuel Calays
Lane Grp Cap (vph)		569	906	327	881			495	886	85	162	
v/s Ratio Prot		c0.29	0.05	c0.08	0.20	다냥.		c0.15	0.02		0.00	5 4
v/s Ratio Perm			0.09	0.22				c0.09	0.07	0.01		
v/c Ratio		0.88	0.24	0.58	0.38			0.65	0.16	0.14	0.05	
Uniform Delay, d1		23.6		12.9	10.6			19.2	9.5	31.1	30.8	
Progression Factor		1.00		1.00		, ~ 45°		1.00	1.00	1.00	-1.00	
Incremental Delay, d2		14.9		2.5	0.3			3.1	0.1	8.0	0.1	
Delay (s)	r tug	38.6	8.6	15.4	- 10.9			22.3	9.6	31,8	30.9	
Level of Service		D		В	В			C	Α	C	C	
Approach Delay (s)	1000	25.5			12.5			:=17,1			31.5	
Approach LOS		С			В			В			С	
Intersection Summary	THE REPORT OF THE PARTY OF THE	ga anni et saunda menten en saunda	IN IS THE PRESENT OF THE STREET	h ware i	P7p2 Log010 76s				A Section of Section Co.		ia est	
HCM Average Control [	Delay		19.8		HCM Le	evel of S	ervice		В			
HCM Volume to Capaci	ty ratio		0.72		1.50					5		
Actuated Cycle Length	(s)		73.8			lost time			12.0			
Intersection Capacity U		1.	70.0%		ICU Lev	el of Se	rvice		С			1.5
Analysis Period (min)			15									
c Critical Lane Group									4			

· · · · · · · · · · · · · · · · · · ·	۶	>-	7	€	<b>←</b>	•	*	<b>†</b>	<i>&gt;</i>	<b>\</b>	<b>↓</b>	1
Movement	EBL	ÉBŤ	EBR	WBL	.WBT-	WBR	NBL	NBT:	NBR	SBL	SBT	SBR
Lane Configurations		<b>€1}</b>			र्स	7,		<b>€</b>	7	•		7
Ideal Flow (vphpl)	1900		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95			1.00	1.00		1.00	1.00		1.00	1.00
Frt		0.99	4,4		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)		3507		** *	1816	1561	•	1827	1615		1772	1830
Flt Permitted		0.79			0.97	1.00		0.75	1.00		0.75	1.00
Satd. Flow (perm)	<u> </u>	2817			1766	1561		1419	1615		1390	
Volume (vph)	141	440	34	11	281	15	24	6	10	23	6	162
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	- 200 - 7	0.85	0.60	200	0.60	0.89	0.89	4 17 17 17
Adj. Flow (vph)	158	494	38	13	331	18	40	10	17	26	7	182
RTOR Reduction (vph)	0	/	0	0	<u></u> 0	7	0	0	13	0		144
Lane Group Flow (vph)	0	683	0	0	344	11	0	50	4	0	33	38
Heavy Vehicles (%)	0%	1,70	2 - 4%	0%	1 %	0%_	. 0%	: :0%	-0%	4%	0%	0%
Turn Type	Perm		1.35	Perm		Perm	Perm		Perm	Perm	Centros <b>o</b> n	Perm
Protected Phases	- 15 <u>11</u>	7760 <b>/</b> 2			6	and the same	(4) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	. 4			8.	
Permitted Phases	<b>2</b> : :::::::::::::::::::::::::::::::::::	- 'A A 'A	ration ex	- 6 .`` 122120	24.0	6 24,0	4 	ം ക്ക്	6.9	8	66	8 6.9
Actuated Green, G (s) Effective Green, g (s)	HENYT.	24.0 26.0	i ngi e		26.0	26.0	Pyrin i garage	6.9 8.9	8.9		6,9 8.9	8.9
Actuated g/C Ratio	9.2	0,61	er ja Pijas ja		0.61	0.61	Ng kili ik	0.21		فالمراد المرادية		o.9 0.21
Clearance Time (s)	44 \$ 1 A A	6.0	and the second		6.0	6.0	10	6.0	. મુસ્કૃષ્ટ 6.0		6.0	6.0
Vehicle Extension (s)	-3150 ga	3.0	gås je		3.0	3.0		3.0	3.0		- 3.0 - 3.0	3.0
Lane Grp Cap (vph)	والإمقاد المعيسات	1707		<u> </u>	1070	946	2.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	294	335	e specific de la grida.	288	380
v/s Ratio Prot		- 1101 - 3177		·	1070	3 <b>-1</b> 0		234	333		200 7.54	300
v/s Ratio Perm	·	c0.24			0.19	0.01	\$ **	c0.04	0.00		0.02	0.02
v/c Ratio		0.40	W		0.32	0.01	53,000	0.17		e de la comp	0.02	
Uniform Delay, d1		4.4	-	,	4.1	3.4		14.0	13.5	*	13.8	13.8
Kirther verts ≜laster.	abaliy	-1.00	g 235.			<b>-1</b> .00		1.00	1.00		1.00	1.00
Incremental Delay, d2	•	0.2	*,**		0.2	0.0		0.3	0.0	-	0.2	0.1
Delay (s)	. Buern e.	4.5		S. 44 (	4.3			14.2	13,5		14.0	
Level of Service		A			A	À		В	В		В	В
Approach Delay (s)	in Basi	4.5	1		4.3		*	14.1			13.9	
Approach LOS		Α			A			В			В	
Intersection Summary					en Caldina	Lange - State St.				The same of the sa		
HCM Average Control [			6.5	1		vel of S			Α			
HCM Volume to Capaci			0.34			a Pin	. <del>(</del> ,			,	1 2	
Actuated Cycle Length			42.9			ost time			8.0			
Intersection Capacity U	tilizatior	) · · ·	51.0%	1	CU Lev	el of Se	rvice		Α			
Analysis Period (min)			15									
c Critical Lane Group						#1.4						÷.

	MDN		Site In	ıform	ation	`			
Agency/Co. Date Performed Analysis Time Period Project Description 09-					41.01	<u> </u>			
Date Performed Analysis Time Period Project Description 09-			Interse	ction			Enterprise	Dr/Rt 19	9 WB Or
Analysis Time Period Project Description 09-	CME, ENT	199WBONnbpm	Jurisdio	ction			Town of L	llster, NY	
roject Description 09-	6/18/2009		Analysi	is Year			2014 No-l	3 <i>uild</i>	
	PM Peak I	Hour	_						
	024d, Ulster Te	ch City							
ast/West Street: Route		тр	North/S	outh S	treet:	Enterpr	ise Drive		
ntersection Orientation:	North-South		Study P	eriod (	(hrs):	0.25			
/ehicle Volumes an	d Adiustmei	nts	•						
lajor Street	T .	Northbound				-	Southbou	nd	******
Novement	1	2	3			4	5		6
	L	Т	R			L	Т		R
/olume (veh/h)		421				89	261		
eak-Hour Factor, PHF	1.00	0.90	1.00		0	.66	0.66		1.00
lourly Flow Rate, HFR veh/h)	0	467	0		1	134	395		0
Percent Heavy Vehicles	0					1			
/ledian Type				Undiv	⁄ide <b>d</b>				
RT Channelized			0						0
anes	0	1	0			0	1		0
Configuration		T				LT			
Jpstream Signal		0					0		
/linor Street		Eastbound	•	ĺ			Westbou	nd	
/lovement	7 8		9			10	11		12
	L	Ţ	R			L	Т		R
/olume (veh/h)									
Peak-Hour Factor, PHF	1.00	1.00	1.00		1	.00	1.00		1.00
lourly Flow Rate, HFR veh/h)	О	0	0		0		0		0
Percent Heavy Vehicles	0	0	0			0	0		0
Percent Grade (%)		0					0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized	Ī		0						0
_anes	0	0	0			0	0		0
Configuration		-							<del>-</del>
Delay, Queue Length, a	nd Level of Se	rvice		لب		•		<u> </u>	
Approach	Northbound	Southbound		Westbo	ound			astboun	d
Movement	1	4	7	8		9	10	11	12
_ane Configuration	<u> </u>	<u>L</u> T		۲	$\dashv$		10	· · · · · · · · · · · · · · · · · · ·	+ '*
		134				· ·			<del></del>
/ (veh/h)				<b></b>				-	
C (m) (veh/h)		1100						<u> </u>	
//c		0.12							
95% queue length		0.41							
Control Delay (s/veh)		8.7							
LOS	<u> </u>	Α							
Approach Delay (s/veh)									
Approach LOS					•		1		

						·	<del></del>				_	
	ၨ	<b>-</b> ►	$\rightarrow$	•	<b>←</b>	•	4	<b>†</b>	<b>/</b>	<b>/</b>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR.	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	الوالو							**			4 <b>†</b>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	14	12	12	12	12	12	14	12	12	12
Total Lost time (s)	4.0							4.0			4.0	
Lane Util. Factor	0.97							0.95			0.95	
Frt	1.00					14		1.00			1.00	
Flt Protected	0.95							1.00			0.99	
Satd. Flow (prot)	3735					•	¥.,	3574			3557	
Flt Permitted	0.95						•	1.00			0.82	
Satd. Flow (perm)	3735	4 N.	-			954	المناز المالال	3574		5 - 1	2930	,
Volume (vph)	108	0	0	0	0	0	Δ.	749	<u></u> 0	20		
		_	_	_	_	•	0 ••• ••			39	279	0
Peak-hour factor, PHF			0.84	0.92	0.92	0.92	0.81		0.81	0.90	*	0.90
Adj. Flow (vph)	129	0	0	0	0		0	925	0	43	310	0
RTOR Reduction (vph)			0	0.			0	0	· : 0	0		0
Lane Group Flow (vph)		0	0	0	0	ال ا	0	925	0	0	353	0
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	1%	₃2%_	0%	1%	2%
Turn Type	Prot									Perm		
Protected Phases	-y4			1. :			r þægi	2			, <b>- - -</b>	
Permitted Phases										6		
Actuated Green, G (s)	7.9					Say of		33,2			33.2	
Effective Green, g (s)	9.9						•	35.2			35.2	
Actuated g/C Ratio	0.19	wî tari						0.66	g bef	oren en jage Hartin kan andre en jage	0.66	
Clearance Time (s)	6.0							6.0			6.0	
Vehicle Extension (s)	3.0					ga de el Alvanos espe	. Wil	3.0	ام داده م <del>روس</del> ت الداد	·	3.0	
Lane Grp Cap (vph)	696							2369			1942	
v/s Ratio Prot	c0.03	4.4	ia de la e	:	7 (-) - (*) *[*]-	. 182 BY	149.25	c0.26		h 1, 21		4.4
v/s Ratio Perm	1										0.12	
v/c Ratio	0.19	yteri j	·		·	4.4	12.	0.39	egy jir	Again to the	0.18	is di
Uniform Delay, d1	18.2	-		4.				4.1			3.4	
Progression Factor	1.00		12.5	-2		. 1.15	- 	1.00	in and a second		1:00	Sec. 1.1
Incremental Delay, d2	0.1			•				0.1			0.0	-11 3 -11
Delay (s)	18.3			4	Land to the			4.2		1154	3.5	ja n
Level of Service	В	. 7.5		•				Α.		. 11	Δ.Δ	12 "
A SEC SECTION TO SECURITY SECURITY		18.3	Service (Service)		0.0		. 19	4.2			3.5	
Approach LOS	ige in a second	В			Α.	. 41	` # · · · · ·	A A		, = .	Α.	` · ·-
Intersection Summary	og National States						lielekt:	T and Tay Tell	Taggarata R	rica <del>il a</del> ine is ⇒	sagailika	antis la feriali
	Doles:					vol of C					-6144114	
HCM Volumes to Conso			5.3		JCIVI LE	vel of Se	ervice		А			
HCM Volume to Capac		*.	0.35		· •					* .		•
Actuated Cycle Length			53.1			ost time			8.0			
Intersection Capacity L	itilization		46.5%		CU Lev	el of Sei	rvice		Ά			
Analysis Period (min)			15									
c Critical Lane Group	)		-									

	*	•	†	<i>*</i>	<b>\</b>	<b>+</b>	·		
Movement	WBL	WBR	-NBT	NBR	SBL	SBT			e Foreign w
Lane Configurations	35	74	<b>†</b> 1>		**	ተተ			
Sign Control	Stop	-	Free			Free			
Grade	0%		0%			0%			
Volume (veh/h)	2	9	896	- 2	3	276			
Peak Hour Factor	0.50	0.50	0.75	0.75	0.90	0.90			
Hourly flow rate (vph) Pedestrians	4	18	1195	-3	. 3	307	•		
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage			9 4 52				- <sub></sub>		
Right turn flare (veh)						•			
Median type	None	4.5							
Median storage veh)	,		•			•		· · · · · · · · · · · · · · · · · · ·	
Upstream signal (ft)	$\hat{x}^{-1}z$	÷		- 11		721	es de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		egista de V
pX, platoon unblocked			•		•			•	•
	1356	599			1197	1 of \$10	Harry Contract		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
vC1, stage 1 conf vol									•
vC2, stage 2 conf vol			e for the t				a de la composição de la composição de la composição de la composição de la composição de la composição de la c		
vCu, unblocked vol	1356	599			1197	ur -s. s.			
tC, single (s)	\$ 6.8	7:3			4.8	物はなず	等等数 不改		王 李 134
tC, 2 stage (s)	. ಚಿನೆಗಳ	<b>Λ</b> Γ	u na se se se se se	i salien si	ಇತ್ತಿ <b>ಕ</b> ್ಕ್		e egas i videvas	ing and the second of the seco	u.W. satu i sin
(F (s)	3.5		- (1) (3)	1,000	2.5				3
p0 queue free % cM capacity (veh/h)	97 42	95 399	- ". t ya		99 432	وف موقع المراجع بي ال	garalyans - A	recent of the actions	
- con tenedor a sono tenedo e									
Direction, Lane#	WB 1	WB 2	∈NΒ.1	NB 2	. SB 1:	····	SB 3 👢 🚆		
Volume Total	4	18	796	401	3	153	i [153		F - F
Volume Left	4	0	0	0	3	0	0		
Volume Right	0	2.3 -52.	. 0		0	4.75	0		
cSH	142	399	1700	1700	432	1700	1700		
Volume to Capacity Queue Length 95th (ft)	0.03	0.05 4	0.47		0.01		0.09		
Control Delay (s)	31.1	14.5	0 0.0	0	13./ 13./	0 0 0	0 0,0		314.0
Lane LOS	D	В	0.0	0.0	R		: 'O,O'		
Approach Delay (s)		_	0.0	. 4	0.1	e Name di Lei		ent of a first order	<b>28</b> 5 175
Approach LOS	C							*	
• •	igogaphataiti	BÜLSLIFTELL I	Towns in 1884	»—1.285.Ti. 0 :	erana dia 191	io azar - v	Typi <del>lle hae. 1, 4-4</del> . 4	(a), jiya ka <u>iledaka II da</u> ara sa <del>il</del> e na sa	till alle engle trebe å
Intersection Summary	727-265		A 2	vetitifi£					
Average Delay Intersection Capacity U	Itilization		0.3	. 1.	منج دادا	el of Se	nvice	· <b>A</b>	ŧ
Analysis Period (min)	Julization	ι	34.8% 15		CO Lev	eiui oe	VICE	Α	\$
Andiyələ i Grida (IIIII)			10				-		
								•	

	<u> ر</u>		*	•	+	•	4	†	<i>&gt;</i>	<b>\</b>	<b>↓</b>	4
Movement 2.2.	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	ŅBŔ	SBL	SBT	SBR
Lane Configurations		<u>†</u>			4			<b>†</b> î»	-		ተተ	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1	0	2	0	2	0	896	.0	0	278	0
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	2	0	4	-0	4	0	1195	-Q	0	309	:0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage				÷	**	er lett	** - 15 - 5 -					1 1
Right turn flare (veh)												
Median type		None	<i>!</i>		None							
Median storage veh)												
Upstream signal (ft)	ere i i i	- 1	$x_{i} \in \mathbb{R}_{+1}$				84. OSB	1281	2 2		1114	3 - 4 - 2 
pX, platoon unblocked	1.00	1.00		1.00	1.00	1.00				1.00		
vC, conflicting volume	910	1504	154	1350	1504	597	309	\$5. V.		1195	100	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol		48.3		i dezide.		8 J. S			1 - 41 - 1			
vCu, unblocked vol	909	1503	154	1349	1503	596	309			1194		
the residue of the second seco	7.5	6.5	6.9	8.5	6.5	6.9	<b>≟</b>			4.1	grandy.	
tC, 2 stage (s)	27											
tF_(s)	3.5	4.0	3.3	4.0			2.2		e eff :	2.2		
p0 queue free %	100	98	100	94	100	99	100			100		
cM capacity (veh/h)	228	123	864	71,	123	451	1248	÷¥"		580		- \$
Direction, Lane #	EB:1.	WB 1.	NB 1	NB 2		- SB 2		CLE AND TO				
Volume Total	- 2	8	796	398	154	154						4 1.8
Volume Left	0	4	0	0	. 0	0						
Volume Right	0	4	0	.0	0.	- 0				3 Y P.	- je-	er en en en en en en en en en en en en en
cSH	123	122	1700	1700	1700	1700						
Volume to Capacity	0.02		0.47	0.23	0.09	0.09						· · · · / _ · · · · · · · · · · · · · ·
Queue Length 95th (ft)	1	5	0	0	0	0						
Control Delay (s)	34.9	36.4	0.0	0,0	0.0	0.0	e jakir	2	· .		4000	1
Lane LOS	D	Е										
Approach Delay (s)	34.9		0.0	+ 4 1 1	0.0	****	Lar	#10 HT		. * 57		
Approach LOS	D	E										
Intersection Summary		<b>Ma</b> ley				7.01.70.1 7.07.00.1 0.00.00.00.00.00.00.00.00.00.00.00.00.0				ijuii		
Average Delay			0.2									
Intersection Capacity Uti	lization		34.8%	j	CU Lev	el of Se	rvice		A			$z_{i} \mapsto \Sigma_{(i)}$
Analysis Period (min)			15									
									-			

	ħ	†	↓	<b>≽</b> J	4	7	
Movement	NBL	. NBT	SBT	SBR	- SEL-	SÉR	
Lane Configurations		<b>↑</b> ↑	<b>ተ</b> ተ			7*	
Sign Control		Free	Free		Yield		
Grade		0%	0%		0%		
Volume (veh/h)	.0	896	280	0	.0	313	· · · · · · · · · · · · · · · · · · ·
Peak Hour Factor	0.75	0.75	0.90	0.90	0.84	0.84	
Hourly flow rate (vph)	. 0	1195	311	0	0	373	
Pedestrians							
Lane Width (ft)	1		-				
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		• .			Raised		
Median storage veh)	-				0		
Upstream signal (ft)	- :	1096	1299		1.2.5		
pX, platoon unblocked	24.2				0.94		
vC, conflicting volume	311			-	908	156	
vC1, stage 1 conf vol					311		
vC2, stage 2 conf vol					597		
vCu, unblocked vol	311				836	156	
tC, single (s) tC, 2 stage (s)	4,1		~		6.8 5.8	6.9	
tE(s)	2.2			13.3	3.5	3.3	
p0 queue free %	100	·	# 4 T		100	57	
cM capacity (veh/h)	1246	e jaji ta		s eile	302	866	
		ugarana a	Morsania institu	- ABA			
Direction, Lane #		NB 2	SB1	SB 2	Apple of again, and option to	end personal	
Volume Total	597				-373		요마루하다 마루션 . 무취되었다.
Volume Left	.0	0	0	0	0	4	
Volume Right	0	0			373		
cSH	1700	1700	1700	1700	866		
Volume to Capacity	0.35		0.09	4.5	0.43		
Queue Length 95th (ft)		0	0	0	55		
Control Delay (s)	0.0	0.0	0,0	0.0	12,3		
Lane LOS		5			B . ann		r e e e e e e e e e e e e e e e e e e e
Approach Delay (s)	0.0		0.0		12.3		等的。我也就是一个一样的。这个人也可以
Approach LOS					В		
Intersection Summary							
Average Delay			2.4	-			
Intersection Capacity L	Itilization	**.	33.8%	1	CU Lev	el of Se	ervice A
Analysis Period (min)			15				
		• •					

	۶	-*	*	•	<b>+</b>	1	1	†	<b>/</b>	<b>\</b>	<b>↓</b>	4
Movement	EBL.	EBT	EBR	WBL	WBT	WBR	NBL	NBT⊹	NBR-	SBL	SBT	SBR
Lane Configurations				•	4			414			<b>↑</b> Ъ	
Sign Control		Stop			Stop			Free		-	Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	Ò	0	1	0	1	. 2	895	0	Ò	593	0
Peak Hour Factor	0.92	0.92	0.92	0.50	0.50	0.50	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	2	0	2	3	1193	0	.0	659	0
Pedestrians								_				
Lane Width (ft)						475	•	1.5				
Walking Speed (ft/s)					.:							
Percent Blockage	1.3	-						.73.7				1 1
Right turn flare (veh)	252 37	Mada			NA SEC				50 kg 1			
Median type		None			None			4 4	21 1	1.3		
Median storage veh) Upstream signal (ft)		· .						700	r	2.4		
pX, platoon unblocked	0.92	0.92		0.92	0.92	0.92		788		0.00		
vC, conflicting volume	1263	1858	320		1858	597	659			0.92		
vC1, stage 1 conf vol	الخذة	1000	329	1020	* 31000	391	เดอล		2 Dun 1 Net	-1193		
vC2, stage 2 conf vol			3 1, 12	1	A		والمعروبة لأراوا				. •	
vCu, unblocked vol	1196	1845	329	1485	1845	470	659			1120	3 50	學數分類
	7.5		6.9			6.9		ie Bei	ega d		in an agra	14.55 6 1 27
tC, 2 stage (s)	c distinction	24 <b>9.9</b> .	. 9.19.	· · · · · · · · · · · · · · · · · · ·		. To New York	ं श्रीक्कर <b>!</b>	문화, 함드비설 -	ive despite in the		123/3	
(F, (s)	3.5	4.0	3.3	3,5	4.0	3.3	. 2.2		1. 1.148×	2.2		
p0 queue free %	100	100	100	98	100	100	100	Bedraff (1920)	,	100		e esta
cM capacity (veh/h)	129		666	81					- -중취(원 - 15)	-568	- a - 11.	ing state of
Direction, Lane#	WB 1			SB 1	SB 2		n 7575 Eligh Batha	E ROOM & CALONING		, , , 550. Herrosa	v – . Mark – same	
Volume Total	VVD I	400	-146-2- 796		Carried Car 17 cap in the			TVI VE TATION P	Magazin ar seri i			
Volume Left	2	<del>4</del> 00	1.90	439 0	220 0		20 Z =		्रीक्षणे (१८७८) -		٠	* \$ 18.5
Volume Right	· 2	∵_0-	0	0	0 1 * 0	egyeyê e .	ي رواد	<u> </u>	sa tijut, la	e de la companya de l		.75
cSH	139	939	1700	1700	1700	Hilliam Shar	TP 1 1 1			. *:		5 FT .
Volume to Capacity	0.03	0.00			0.13	3 8 3 F	wind 최고		- 6884, 10	a da inin	4.2	
Queue Length 95th (ft)	2	0	.U. <del></del> .U	0,20	بر ہو ہے۔ 0	\$ 50°4						
Control Delay (s)	31.7	0.1	0.0		0.0				5.4	. t		
Lane LOS	D	Α	0.5	9.0	9,9	*				.* •		
Approach Delay (s)	31.7			0.0	<del> </del>	* 1 - jy			157	, with the	100	10.00
Approach LOS	D			9.5		1.5		'	. '	* # 1.		. ** **
· ·	- Ministra	eresta de Ministera			in ali dae deali s				<u>ranga</u>	UZBABAL III		e e e e e e e e e e e e e e e e e e e
Intersection Summary							1 4 4 4 4 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5					
Average Delay	U1**		0.1	24	o ta l	-1 -t O :						
Intersection Capacity Uti	lization		36.1%	. 1	CU Lev	el of Ser	vice		A			
Analysis Period (min)	-		15				1					
		•				-						

	<b>≯</b>	-	*	•	+	•	4	<b>†</b>	<i>/</i>	<b>&gt;</b>	<b>↓</b>	-√
Movement	EBL	ÆBT	EBR	WBL.	WBT	WBR :	NBL	NBT	∴NBR :	SBL	SBT	SBR
Lane Configurations		43						<b>†</b> \$	-		<del>- 4</del> ↑	
Sign Control		Stop			Stop			Free			Free	
Grade	: 24	0%	^	0	0%		0	0%		0	0%	
Volume (veh/h) Peak Hour Factor	0.50	0 0.92	0.50	.0 0.92	0 0.92	0 0.92	0 0.92	895 0.75	1 0.75	0.90	593	0
Hourly flow rate (vph)	0.50	0.92	0.50	0.92	0.92	0.92	0.92	1193	0.75	0.90	0.90 659	0.92 0
Pedestrians		Ų	U.	9.	Ų	U	Ų	1100		U	. Julia	U
Lane Width (ft)								· · · ·			×1 :	2
Walking Speed (ft/s)									* .			
Percent Blockage	3. 1. 11								٠.		\$	
Right turn flare (veh)									. •			
Median type		None			None					. 15		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Median storage veh) Upstream signal (ft)	n a lasa in	Tak ericia			2 4 8,200	]_174418418	4	501		gir Wiles	Citizen 1 Trans	er e j
pX, platoon unblocked	0.89	0.89		0.89	0.89	0.89		:00.1		0.89		**.
vC, conflicting volume	1256	1854	329	1523		597	659			1195	4.00	Agreement of
vC1, stage 1 conf vol		, , , ,	y_y		i i é o è	, ,	,,,,,,					el Program
vC2, stage 2 conf vol		k deligi	alie.					andi Senga	# 1		报验:	7
vCu, unblocked vol	1165	1836	329	1465	1835	426	659			1096		
tC, single (s)	7,5	6.5	6.9	7.5	6,5	6.9	4.1	34400		41		
tC, 2 stage (s)		.°Sovião	് വര്	୍ ଅନ୍ୟୁଲ୍ଲ	-1.550.66 k		்⊹்ல்∀்	1 . Hi1	este e destina e e fila	് വരം	ougura in s	erite e
(F (s) p0 queue free %	3.5 99	4.0 100	3.3 100	3,5 100	4.0 100	್ರವ 100	2.2 100		Action Co.	100		
cM capacity (veh/h)	ິ 135	67	672		67	514	925	ν.,	- 19.4 × 300		nga ‡ani s	
		in the second	. 14 41	- 11.794441	refreche Sie				1959), in Suid-Afri <del>Vangouse</del> ee daa		in de la Colonia. La composition de la Colonia de la Colonia de la Colonia de la Colonia de la Colonia de la Colonia de la Colonia	Samuel Carrottean
Direction, Lane #	EB.1		NB 2	SB 1	SB.2		TERMINET TO	Carlo Santinos		Tarren de la companya		
Volume Total Volume Left	2	796 0	ି 399 0	220 0	439 0	i tati titi i i j	2	ii ta ii		gar Yan		Par i
Volume Right	, ki 11.00	_	1		· 0			i jeja				**
cSH	135	1700	1700	574	1700			* 24			17 (1944) 1 (1944)	
Volume to Capacity				0.00	0.26	V 1	No. 1945	Agrical Par	erginisa.		e waath	41- J2-31 1- 1- J2-31
Queue Length 95th (ft)	1	0	0	0	0							
Control Delay (s)		0.0	0.0	0.0	0.0	1 - 1 -				44.1		ا اگسیده آه د
Lane LOS	D	i nina.	de la la	0.0		tian 21	,	2 2 3		. 1	- 2 22.	
Approach Delay (s) Approach LOS		U,U		0.0		191 Dis			4 7			
	D											
Intersection Summary												
Average Delay	e		0.0	10	<b>0</b> 111.55	un terrai	Sec.					
Intersection Capacity U Analysis Period (min)	ullization	r	34.8%	4.0	U Lev	el of Se	rvice		Α	1 1		
Analysis Period (min)			15									
			* * *						•			

	۶		*	€	<b>←</b>	•	*	†	<b>/</b>	<b>/</b>	<b></b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		€Î	7		€}•			<b>†</b> ĵ,		Ť	<b>†</b> }	
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	11	11
Total Lost time (s)		4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00			0.95		1.00	0.95	
Fit : A Life in the control of the c		1.00	0.85		0.93			1.00		1,00	1.00	
FIt Protected		0.95	1.00		0.98			1.00		0.95	1.00	
Satd. Flow (prot)		1760	1776		1725			3569		1685	3444	•
Flt Permitted		0.78	1.00		0.81			1.00		0.27	1.00	
Satd. Flow (perm)	* 1	1435	1776		1426	13. <u>28. – 11. – 11. – 1</u>		3569		483	3444	
Volume (vph)	40	1	24	20	0	22	0	835	9	4	576	14
Peak-hour factor, PHF	0.50	0.50	0.50	0.50	0.50	0.50	0.87	0.87	0.87	0.86	0.86	0.86
Adj. Flow (vph)	80	2	48	40	0	44	0	960	10	5	670	16
RTOR Reduction (vph)	0	0	40	0		. 0	0	1	0	0	'_ <b>2</b>	0
Lane Group Flow (vph)	0	82	8	0	48	0	0	969	Ō	5	684	0
Heavy Vehicles (%)	- 3%	0%		0%	0%	0%	-0%	1%	.∵0%	0%	- 1%	0%
Turn Type	Perm		Perm	Perm						Perm		
Protected Phases		- 4		4 Hole	8.	Selfed a		. 2			6	gy (d. 1
Permitted Phases	4		4	8						6		
Actuated Green, G (s)		7,6			7.6			36.6			36.6	udesti i HT
Effective Green, g (s)		9.6	9.6		9.6			38.6		38.6	38.6	
Actuated g/C Ratio		0.17	0.17		0.17			0.69		0.69		
Clearance Time (s)		6.0	6.0		6.0			6.0		6.0	6.0	
Vehicle Extension (s)	ليكافئ عرف الراء	3:0	3.0	للسل موالد ورا	3,0		المرابعة ( الترابية ) وما كالمسك المساورة ( عاد ) و ا	3.0			3.0	
Lane Grp Cap (vph)		245	303		244			2451		332	2365	
v/s Ratio Prot								c0.27		'- Jīt	0.20	1942 J
v/s Ratio Perm		c0.06	0.00		0.03			_		0.01		
v/c Ratio		0,33	0.03		0.19		Profession (	0,40			0.29	1.5
Uniform Delay, d1		20.5	19.4		20.0			3.8		2.8	3.4	
Progression Factor	Sec. 198	1,00	1,00		1.00	* * * * * * * * * * * * * * * * * * * *		1.00		1.00	1.00	3,
Incremental Delay, d2		0.8	0.0		0.4			0.1		0.0	0.1	
Delay (s)	· · · · · · · · · · · · · · · · · · ·	21.3	19.4		20.4			3.9		2.8	3.5	e e
Level of Service		С	В		C			Α.		Α	ΑΑ	
Approach Delay (s)	and Arthur	20.6			20.4			3.9			3.5	
Approach LOS		С			С			Α			Α	
Intersection Summary			smaf.	je velik is nes		i adi an sa s				Židė liju	In very series	A PARTY
HCM Average Control D			5.6		HCM Le	evel of S	ervice		Α			
HCM Volume to Capaci		** .	0.38						17			1
Actuated Cycle Length			56.2			lost time	. ,		8.0			
Intersection Capacity Ut	tilization	1	39.2%	. 1	ICU Lev	el of Se	rvice		Α			
Analysis Period (min)			15									
c Critical Lane Group					٠.			*	· .			

·	<b>*</b>	-	*	•	+	4	*	†	*	<b>\</b>	<b>↓</b>	*/
Movement	EBL	EBT	EBR	_WBL	WBT.	WBR	NBL	NBT	NBR:	SBL	SBT	SBR
Lane Configurations	. ኘ	₽			€	7	-	4		¥ς	1}→	
ldeal Flow (vphpl)	1900	1900	1900	1900	190Ô	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Frt-	1.00	1.00			1.00	0.85		0.90	•	1.00	0.88	1,1
Fit Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1624	1835	: .		1845	1812		1935		1787	1611	2 1 To 1
Fit Permitted	0.43	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	741	1835	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1845	1812	grava.	1935		1787	1611	
Volume (vph)	203	186	1	0	70	640	0	1	2	600	4	16
Peak-hour factor, PHF	0.54	0.54	0.54	0.93	0.93	0.93	0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	376	344	2	0	75	688	0	1	3	659	4	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	3	0	0	10	0
Lane Group Flow (vph)	376	346	Ó	0	75	688	0	1	Ó	659	12	0
Heavy Vehicles (%)	.0%	0%	0%	- 0%	3%	1%	0%	<b>0%</b>	0%	. 1%	. 0%	. 0%
Turn Type	pm+pt			pm+pt		Free	Split			Split		
Protected Phases	7	4			8		•	2				RI NE
Permitted Phases	4	44 1	. ": "	8		Free				1 °	1,000	
Actuated Green, G (s)	20.2	20.2			4.3	68.1		0.5	Samuel Sign	29.4	29.4	
Effective Green, g (s)	22.2	22.2			6.3	68.1		2.5		31.4	31.4	~ : * . *
Actuated g/C Ratio	0.33	0.33			0.09	1.00		0.04		0.46	0.46	
Clearance Time (s)	6.0	6.0			6.0			6.0	•	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	Vasa ili sali		3.0	olekaja ja ja ja		3.0	Tubala	3.0	3.0	
Lane Grp Cap (vph)	396	598			171	1812		71		824	743	
v/s Ratio Prot	c0.17		4 - 3		0.04			0.00		c0.37		aan eig
v/s Ratio Perm	c0.14				· · · · · · · · · · · · · · · · · ·	c0.38				and a steel of	7	
v/c Ratio	0.95	0.58			0.44		\$ (4.4.E)	0.02		0.80	0.02	1879
Uniform Delay, d1	20.9	19.1			29.2	0.0	•	31.6		15.7	10.0	** ;
Progression Factor	1.00	1.00		ransa 194	1.00	1.00	14 E.	1.00		1.00	1.00	
Incremental Delay, d2	32.1	1.4			1.8	0.6		0.1		5.5	0.0	
Delay (s)	52.9	20.4	11 1	, J. J. J. L.	31.0	0.6	er et in 188	31.7	1	21.1		*
Level of Service	D	С			С	À		Ĉ	·	C	Α	
Approach Delay (s)		37.4			3.6			31.7		- N - 1573	20.8	Q. P. S.
Approach LOS		D			Α			С			C	
Intersection Summary.				THE TANK THE						ab, 1 May 25 Candle par 11 m		Er Lar Ven Jige
HCM Average Control [	Delay		20.3		HCM Le	evel of S	ervice		С			
HCM Volume to Capac	•		0.80								7.57	
Actuated Cycle Length			68.1		Sum of	lost time	e (s)		8.0			
Intersection Capacity U		1	64.5%		ICU Lev	el of Se	rvice		С		2.	
Analysis Period (min)			15									
c Critical Lane Group							. •				100	

	<b>&gt;</b>	<b>→</b>	•	•	<b>←</b>	4	•	<b>†</b>	<i>*</i>	<b>/</b>	<b>↓</b>	1
Movement :	÷EBĿ.	EBT	EBR.	WBL	:WBT	::WBR:	NBL-	-NBT	NBR	SBL	#SBT	SBR
Lane Configurations	•	<u>-</u> -€Î	*	. <b>'</b>	<u></u>	7		ની	7*	*	1>	
ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)		4,0	4.0	4,0	4.0	8 30 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	
	4,44,4	1.00	0,85	1,00	1.00	g		1.00	0.85	1.00	1.00	4
Fit Protected		1.00	1.00	0.95	1.00	•		0.95	1.00	0.95	1.00	
Satd Flow (prot)	- 1 A 14	1756	1492	1624	1693	4. 46		1673	1561	1491	1837	1.3
FIt Permitted		1.00	1.00	0.14	1.00			0.45	1.00	0.60	1.00	
Satd, Flow (perm)	. 4. 9	1756	1492	235	1693			794	1561	937	1837	
Volume (vph)	0	445	329	177	338	0	310	2	219	6	4	0
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0,89	0.89	0.92	0.92	0.92	0.50	0.50	0.50
Adj. Flow (vph)	0	556	411	199	380	Ô	337	2	238	12	8	0
RTOR Reduction (vph)	<u>`</u> 0	0	180	Ō	0	0	0	0	64	0	0	<b>0</b>
Lane Group Flow (vph)	0	556	231	199	380	0	0	339	174	12	8	O
Heavy Vehicles (%)	0%	- 1%	1%	- 0%	. 1%	- 0%	≥ 1%	. 0%	. 0%	17%	- 0%	- 0%
Turn Type	Perm		pm+ov	pm+pt		Perm	pm+pt		pm+ov	Perm		
Protected Phases		6	≥ - 3	5.	- 2		- 3	. <b> 8</b>	5	. 3. 14. <b>5</b> .	4	7434 <b>1</b>
Permitted Phases	6		6	2		2	8	*	8	4		
Actuated Green, G (s)		23.1	38.7	_ 37,8	37.8			26.3	35.0	4.7	4.7	
Effective Green, g (s)		25.1	42.7	39.8	39.8			28.3	39.0	6.7	6.7	
Actuated g/C Ratio		0.33	0.56	0.52	0,52			0.37	0,51	0.09	0.09	
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0	் <b>்.3.0</b>	∵ ∵ 3.0,	3.0		a e e e	3.0	3,0	3.0	3.0	412VI
Lane Grp Cap (vph)		579	916	318	885			499		82	162	
v/s Ratio Prot		c0.32	0.06	c0.09	0.22	学说 电电	25 QQ	c0.16	0.03		0.00	
v/s Ratio Perm			0.10	0.24				c0.10		0.01		
v/c₌Ratio	dituiks	-0.96	9.544 (2.12.136)		0.43	BONE.		0.68	0.20	0,15	0.05	a Lygida.
Uniform Delay, d1		25.0	8.5	14.0	11.2			20.1	10.1	32.1	31.8	
Progression Factor		1.00		5 PA - 1944	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		27.6	0.1	3.8	0.3			3.7	0.1	0.8	0.1	
Delay (s)		52.6	8.7	17:9	11.5			23.8	10.2	32.9	31.9	
Level of Service		D	Α	В	B			С		C	С	
Approach Delay (s)		34.0		yri y Ka	13.7	. 14-		18.2		Møler –	32.5	
Approach LOS		С			В			В	1		С	
Intersection Summary		A CANADA ESTA La CATA AL RESISTA	PROJECT DE LES SE PROJECTO DE LES SE PROJECTO DE LES SE				and deputed.				2 177 1877 1 177 1877 2 177 1877	
HCM Average Control E			24.2		HCM Le	evel of S	ervice		С			
HCM Volume to Capaci	~		0.77			े हैं इ.स.			* * * * * * * * * * * * * * * * * * * *	i e	sk je	
Actuated Cycle Length			76.1			lost time			12.0			
Intersection Capacity U	tilization		75.2%		ICU Lev	el of Se	rvice		D			
Analysis Period (min)			15									
c Critical Lane Group				:			<b>`</b>	1	•			

Movement		<b>&gt;</b>		*	€	<b>←</b>	*	*	<b>†</b>	<b>/</b>	<b>\</b>	<del> </del>	4
Lane Configurations   4	Movement	EBL	EBT	EBR	WBL	WBT	_WBR	-NBL	NBT	NBR	- SBL	SBT	SBR
Light   Flow (rychpl)   1900   1000	Lane Configurations		4Th			र्स	Ħ		હી				#
Lane Width	Ideal Flow (vphpl)	1900		1900	1900		1900	1900			1900		1900
Lane Util. Factor	Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Fit 0.99 1.00 0.85 1.00 0.85 1.00 0.85 1.00 0.85 Fit Protected 0.99 1.00 1.00 0.96 1.00 0.96 1.00 0.96 1.00 Satd. Fitow (prot) 3508 1816 1561 1826 1615 1771 1830 Fit Permitted 0.78 0.97 1.00 0.74 1.00 0.75 1.00 Satd. Flow (perm) 2762 1762 1561 1414 1615 1386 1830 Volume (yph) 153 481 36 12 316 16 25 6 11 24 6 174 Peak-thour factor, PHF 0.89 0.89 0.89 0.85 0.85 0.85 0.60 0.60 0.60 0.89 0.89 0.89 Adj. Flow (yph) 172 540 40 14 372 19 42 10 18 27 7 196 RTOR Reduction (yph) 0 745 0 0 386 12 0 52 4 0 34 40 Heavy Vehicles (%) 0% 14% 0% 138 12 0 52 4 0 34 40 Heavy Vehicles (%) 0% 14% 0% 13% 0% 0% 0% 0% 0% 4% 0% 0% 0% 170 170 1 0 0 14 0 0 156 Lane Group Flow (ph) 0 745 0 0 386 12 0 52 4 0 34 40 Heavy Vehicles (%) 0% 14% 0% 18 0% 0% 0% 0% 0% 0% 4% 0% 0% 0% 12 0 150 12	Total Lost time (s)		4.0			4.0	4.0	•	4.0	4.0		4.0	4.0
Fil Protected	Lane Util. Factor		0.95			1.00	1.00		1.00	1.00		1.00	1.00
Satd Flow (prot)         3508         1816         1561         1826         1615         1771         1830           FIt Permitted         0.78         0.97         1.00         0.74         1.00         0.75         1.00           Satol Flow (perm)         2762         1762         1561         1414         1615         1386         1830           Volume (vph)         153         481         36         12         316         16         25         6         11         24         6         174           Peak-Hour factor, PHF         0.89         0.89         0.85         0.85         0.85         0.60         0.60         0.60         0.89         0.89         0.89           Adj. Flow (rph)         172         540         40         14         372         19         42         10         18         0         0.89<	Fittige legities	1 12	0.99			1.00	0.85		1.00	0.85		1.00	0.85
Fit Permitted	Flt Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (perm)   2762	Satd Flow (prot)	1	3508			1816	1561	3-1	1826	1615		1771	1830
Volume (vyh) 153 481 36 12 316 16 25 6 11 24 6 174 Peak-hour factor, PHF 0.89 0.89 0.89 0.85 0.85 0.85 0.60 0.60 0.60 0.60 0.89 0.89 0.89 Adj. Flow (vyh) 172 540 40 14 372 19 42 10 18 27 7 196 RTOR Reduction (vyh) 0 7 0 0 0 7 0 0 14 0 0 156 Lane Group Flow (vyh) 0 745 0 0 386 12 0 52 4 0 34 40 Heavy Vehicles (%) 0% 1% 4% 0% 1% 0% 0% 0% 0% 0% 4% 0% 0% Turn Type Perm Perm Perm Perm Perm Perm Perm Per	Flt Permitted	•	0.78			0.97	1.00		0.74	1.00		0.75	1.00
Peak-hour factor, PHF	Satd. Flow (perm)		2762		4.	1762	1561	in the fig.	1414	_1615	4.1	1386	1830
Peak-hour factor, PHF	Volume (vph)	153	481	36	12	316	16	25	6	11	24	6	174
Adj. Flow (vph)	Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.60	0.60	0.60	0.89	0.89	
RTOR Reduction (vph)	Adj. Flow (vph)	172	540	40	14		19	1 1 4					4 2004
Lane Group Flow (vph)	RTOR Reduction (vph)	0	7	0	0	0	**** <b>7</b> (	0	0	14	- 0	0	
Turn Type		0	745	0	0	386	12	0	52	4	0	34	
Profected Phases   2   6	Heavy Vehicles (%)	0%-	1%	4%:	0%	1%:	0%	. 0%	~ 0%	0%	4%	0%	- 0%
Protected Phases   2   6	Turn Type	Perm			Perm		Perm	Perm		Perm	Perm		Perm
Permitted Phases   2   6   6   4   4   8   8   8   Actuated Green, G (s)   25.4   25.4   25.4   27.4   9.1   9.1   9.1   9.1   9.1   9.1   Actuated g/C Ratio   0.62   0.62   0.62   0.20   0	Protected Phases		2		1435	- 6			4		4.5	- 8	
Effective Green, g (s) 27.4 27.4 27.4 9.1 9.1 9.1 9.1 9.1 Actuated g/C Ratio 0.62 0.62 0.62 0.62 0.20 0.20 0.20 0.20	Permitted Phases				6		6	4		4	· · · · · · · · · · · · · · · · · · ·	****	
Actuated g/G Ratio 0.62 0.62 0.62 0.20 0.20 0.20 0.20 0.20	Actuated Green, G (s)		25.4		e sala	25.4	25.4		7.1	7.4		7.1	7.1
Clearance Time (s)         6.0         4.0         20         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         3.0         283         374           V/s Ratio Perm         c0.27         0.22         0.01         c0.04         0.00         0.02         0.02         0.02         0.1         0.01         0.00         0.00         0.02         0.01         0.01         0.00         0.02         0.1         0.01         0.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00			27.4			27.4			9.1	9.1		9.1	9.1
Vehicle Extension (s)         3.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         1.0	Actuated g/C Ratio		0.62	leget in		0.62	0.62	lar.	0.20	0.20		0.20	0.20
Lane Grp Cap (vph) 1701 1085 961 289 330 283 374 v/s Ratio Prot	Clearance Time (s)		6.0			6.0	6.0		6.0	6.0		6.0	6.0
v/s Ratio Prot         v/s Ratio Perm         c0.27         0.22         0.01         c0.04         0.00         0.02         0.02           v/c Ratio         0.44         0.36         0.01         0.18         0.01         0.12         0.11           Uniform Delay, d1         4.5         4.2         3.3         14.6         14.1         14.4         14.4           Progression Factor         1.00         1	Vehicle Extension (s)		3,0	1	. 3	3.0	3.0		3,0	3.0		3.0	3.0
v/s Ratio Perm         c0.27         0.22 0.01         c0.04 0.00         0.02 0.02           v/c Ratio         0.44         0.36 0.01         0.18 0.01         0.12 0.11           Uniform Delay, d1         4.5         4.2 3.3         14.6 14.1         14.4 14.4           Progression Factor         1.00         1.00 4.00         1.00 1.00         1.00 1.00           Incremental Delay, d2         0.2         0.2 0.0         0.3 0.0         0.2 0.1           Delay(s)         4.7         4.4 3.3         14.9 14.1         14.6 14.5           Level of Service         A         A         A         B         B         B           Approach Delay (s)         4.7         4.4         3.3         14.9 14.1         14.6 14.5           Approach LOS         A         A         A         B         B         B           Intersection Summary         B         B         B         B         B           ICM Volume to Capacity ratio         0.37         Actuated Cycle Length (s)         44.5         Sum of lost time (s)         8.0           Intersection Capacity Utilization         54.5%         ICU Level of Service         A	Lane Grp Cap (vph)		1701			1085	961		289	330		283	374
V/c Ratio         0.44         0.36         0.01         0.18         0.01         0.12         0.11           Uniform Delay, d1         4.5         4.2         3.3         14.6         14.1         14.4         14.4           Progression Factor         1.00 <t< td=""><td>v/s Ratio Prot</td><td>فحرار تهدهما</td><td>r system</td><td>a a janji d</td><td></td><td>- 1 1/24</td><td></td><td></td><td>463</td><td></td><td></td><td><del></del></td><td>1.5</td></t<>	v/s Ratio Prot	فحرار تهدهما	r system	a a janji d		- 1 1/24			463			<del></del>	1.5
Uniform Delay, d1	v/s Ratio Perm		c0.27			0.22	0.01		c0.04	0.00		0.02	0.02
Progression Factor         1.00 <td>v/c Ratio</td> <td></td> <td>0.44</td> <td>·</td> <td></td> <td>0.36</td> <td>0.01</td> <td></td> <td>0.18</td> <td>0.01</td> <td>19 M. J.</td> <td>0.12</td> <td>0.11</td>	v/c Ratio		0.44	·		0.36	0.01		0.18	0.01	19 M. J.	0.12	0.11
Incremental Delay, d2	Uniform Delay, d1		4.5			4.2	3.3		14.6	14.1		14.4	14.4
Delay (s)         4.7         4.4         3.3         14.9         14.1         14.6         14.5           Level of Service         A         A         A         B         A         HCM Level of Service         A	Progression Factor	Buy sife	1.00	1		1.00	1.00		1.00	1.00	142	-1.00	1.00
Level of Service A A A B B B B Approach Delay (s) 4.7 4.4 14.7 14.5 Approach LOS A A B B B B  Intersection Summary HCM Average Control Delay 6.6 HCM Level of Service A HCM Volume to Capacity ratio 0.37 Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0 Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15	Incremental Delay, d2					0.2			0.3	0.0		0.2	0.1
Approach Delay (s) 4.7 4.4 14.7 14.5 Approach LOS A A B B  Intersection Summary HCM Average Control Delay 6.6 HCM Level of Service A HCM Volume to Capacity ratio 0.37 Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0 Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15	Delay (s)		4.7			4.4	· ::3:3`	-27	14.9	- 14.1	1. e 1	14.6	14.5
Approach LOS A A B B  Intersection Summary  HCM Average Control Delay 6.6 HCM Level of Service A  HCM Volume to Capacity ratio 0.37  Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0  Intersection Capacity Utilization 54.5% ICU Level of Service A  Analysis Period (min) 15			Α				Α		В	В			В
Approach LOS A A B B  Intersection Summary HCM Average Control Delay 6.6 HCM Level of Service A HCM Volume to Capacity ratio 0.37 Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0 Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15	Approach Delay (s)		4.7			4.4		翻翻出版	14.7	. Market	7-1	14.5	
HCM Average Control Delay 6.6 HCM Level of Service A HCM Volume to Capacity ratio 0.37 Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0 Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15	Approach LOS		Α			Α			В			B	
HCM Volume to Capacity ratio 0.37  Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0  Intersection Capacity Utilization 54.5% ICU Level of Service A  Analysis Period (min) 15	Intersection Summary							ELATINE COMM		Fig. 2. Eupine	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		party .
Actuated Cycle Length (s) 44.5 Sum of lost time (s) 8.0 Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15					ŀ	ICM Le	vel of S	ervice		Α			
Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15				0.37				197			1.3		- 15
Intersection Capacity Utilization 54.5% ICU Level of Service A Analysis Period (min) 15				44.5	5	Sum of	lost time	e (s)		8.0			
Analysis Period (min) 15	Intersection Capacity U	tilization		54.5%						Α			
C. Critical Lane Group	Analysis Period (min)			15									
o olimbar carlo orogin	c Critical Lane Group					** .							

	TW	O-WAY STOP	CONTRO	DL SI	JMMARY			
General Information	<u> </u>		Site Ir	ıform	ation			·
Analyst	MDN	<del></del>	Interse	ction	<del></del>	Enterpris	e Dr/Rt 19	9 WB On
Agency/Co.	CME, EN	T199WBONbupm	Jurisdi				Jister, NY	
Date Performed	6/18/2009		Analys	is Yea		2014 Buil		
Analysis Time Period	PM Peak	Hour						
Project Description 09-	-024d, Ulster Te	ch City						
East/West Street: Route		этр			treet: Enter	prise Drive		
Intersection Orientation:	North-South		Study F	eriod	(hrs): 0.25			
Vehicle Volumes an	id Adjustmei							
Major Street		Northbound	<del>,</del>			Southbou	ınd	
Movement	1	2	3		4	5		6
) ( a luma a ( ) ca la (la )	<u> </u>	T	R		<u>L</u>	7		R
Volume (veh/h) Peak-Hour Factor, PHF	1.00	612 0.90	1.00		89 0.66	327	· · ·	4.00
Hourly Flow Rate, HFR						0.66		1.00
(veh/h)	0	680	0		134	495		0
Percent Heavy Vehicles	0				1			
Median Type				Undiv	⁄ided			
RT Channelized			0					0
Lanes	0	1	0			1		0
Configuration		T			LT			
Upstream Signal		0				0		
Minor Street		Eastbound				Westbou	ınd	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)								
Peak-Hour Factor, PHF	1.00	1.00	1.00		1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	0	0	0		0	0		0
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		0		-	` · ·	0		<del></del>
RT Channelized			0					0
Lanes	0	0	0		0	0		0
Configuration								
Delay, Queue Length, a	nd Level of Se	rvice		_				
Approach	Northbound	Southbound	. 1	Westb	ound		Eastboun	d
Movement	1	4	7	8		10	11	12
Lane Configuration		LT						
v (veh/h)		134					1	
C (m) (veh/h)		917						
v/c		0.15						
95% queue length		0.51	•					
Control Delay (s/veh)		9.6						
LOS		9.0 A		1				
Approach Delay (s/veh)				L			l	
			••				··· /··	
Approach LOS		erved				Ge		

	_											
	<b>≯</b>	-+	*	1	<b>←</b>	•	4	1	<b>/</b>	-	<b>↓</b>	4
Movement	∳EBL	EBT	EBR	WBL	WBT.	WBR	= NBL=	NBT	NBR	SBL	SBT	SBR
Lane Configurations	14 (14)							**			47	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	14	12	12	12	12	12	14	12	12	12
Total Lost time (s)	4.0				1.0			4.0			4.0	
Lane Util. Factor	0.97							0.95			0.95	
Frigura (A.C 10 and	1.00							1.00			1.00	
Flt Protected	0.95							1.00			1.00	
Satd. Flow (prot)	3735				985 L. J.	3 1 7		3574	1.5	4-1	3562	÷ .
Flt Permitted	0.95						•	1.00			0.77	•
Satd. Flow (perm)	3735						ing garages in	3574			2765	1111
Volume (vph)	108	0	0	0	0	0	0	1251	n	39	411	0
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.81	0.81	- 0.81	-		0.90
Adj. Flow (vph)	129	0	0.0	0	0	0	0	1544	0	43	457	0
RTOR Reduction (vph)	0	-		0	*	- TEO	_	0	- e o	ñ	0	ő
Lane Group Flow (vph)	129	Ô	0	Õ	Ô	0	0	1544	0	0	500	ñ
Heavy Vehicles (%)	0%	2%	. 2%	2%	2%	2%	2%		2%	- 0%	1%	2%
Turn Type	Prot	<u> ( → - ₹</u>	<u> </u>	. — • • •	10 100 0 m	engenting of a tig	<u></u>	y in a gent of the		Perm	* ** ** ******************************	3, 7
Protected Phases	- S.Z.	dani.		133	4.00		a isaa o	*.\$-0.6 <b>9</b> .	4. 5. 45		6	Francis :
Permitted Phases	rian ian ariba	du de les veres		1 2 195		sign i Arri	sie	e de la composition della comp		ĥ	,	alaki ∤
Actuated Green, G (s)	7.6	gaşırı.		8.00		adio Albara	i i satë	46.3	- Atlanati	less ( ) i	46.3	
Effective Green, g (s)	9.6	artistica, al		74.1	4 - # 3 - # 4 - T	27:85 Fast 1-1	र मा क्राप्तिक	48.3	1 1-85-1436	a. w.	48.3	Estable com
Actuated g/C Ratio	0.15	National -	1.1. W. D		g., et . e. 78			0.73			0.73	기 : : : : : : : : : : : : : : : : : : :
Clearance Time (s)	6.0	7 17 77	7.7.		47 To 10 To 10		5-35	6.0	) * - AT	A second	6.0	. Shuga
Vehicle Extension (s)		alay ali fi i			45.000	Asiokita i	ile des 19	3.0	مائد و دې بي يې	71:5	3.0	<u> </u>
Lane Grp Cap (vph)	544			and the second second	. \$1	Cara projekty.		2619	And the second	estate or of solvers	2027	- Andread Strategies
v/s Ratio Prot	c0.03	144			an Published Services	Žiginis n		c0.43			2021	5 4 <sub>0</sub> 1
v/s Ratio Perm	CO.CO.				Market Age			. ಇಲ್ಲವು		*	0.18	* * .
v/c Ratio	0.24	-4.		25.2		i care Ata	estert e	0.59			0.25	1112
Uniform Delay, d1	24.9			1.12.57				4.1	3 87 576 7	· · ·	2.9	- :-
Progression Factor	1.00	i.e.				, j		1.00	الرامي فحادي	Sa 3 -	1.00	141
Incremental Delay, d2	0.2	1 = =1		* **.*.		*		0.3	7,,84 ,145	in the incidence of	0.1	A. 3
Delay (s)	25.1	ja tere		•	. Service			4.5	H . 1. 1	44.7 g	2.9	4.4
Level of Service	C							Α	•	•	Δ.	' <del>-</del> ,
Approach Delay (s)		25.1	- 3	in the same			200	4.5	ryty i		2.9	40
Approach LOS		C		***	Α	2 . • •		Α		1.5	Α.	
• •	Name d'Alaba			da	<u> </u>	-115 14				Fortie 1 manuary	rus regreer esses s	الراب المستد
Intersection Summary	<del></del>				VIST L. V. STALL VISUS INC.		ED TO TEXT AN	ALA AL UNITED TO	and the state of t			MARKET SANT
HCM Average Control D			5.4		HCM Le	vel of S	ervice		Α			
HCM Volume to Capaci			0.53					٠.				•
Actuated Cycle Length (			65.9		Sum of l	and the second second			8.0			
Intersection Capacity Ut	ilization	).	51,5%		CU Leve	el of Se	rvice		Α			-
Analysis Period (min)			15									
c Critical Lane Group	**	•	-									

	€	4	†	<i>*</i>	<b>\</b>	Ţ				
Movement	WBL	WBR.	NBT	NBR	: SBL	SBT				i Profiti
Lane Configurations	- ·	Ą	<b>†</b> }			<b>ት</b>				
Sign Control	Stop		Free			Free				÷
Grade	0%		0%			0%				
Volume (veh/h)	0	65	1587	18	0	334		100		1.4
Peak Hour Factor	0.80	0.80	0.75	0.75	0.90	0.90				
Hourly flow rate (vph)	0	81	2116	24	0	371				• •
Pedestrians										
Lane Width (ft)	4.3	1.40					121		*	* * * * *
Walking Speed (ft/s)										
Percent Blockage					1: 1.		: ",	·		
Right turn flare (veh)								ń.		
Median type	None	. 1 8		* 4.					2.54	and the
Median storage veh)			200			704				
Upstream signal (ft)		-	393		A 64	721	-	Te Te		. · · · · · · · · · · · · · · · · · · ·
pX, platoon unblocked	0.61	0.61			0.61					
vC, conflicting volume	2314	1070			2140		14. 14.			
vC1, stage 1 conf vol vC2, stage 2 conf vol	1	jul-1821 i j	٠.		2 1 N 2	en de la S	osta Surasan	ayaya e e	as fra =	
vCz, stage z com voi vCu, unblocked vol	2517	466	of the second		2231			F127456107		
tC, single (s)		400 6.9		100			(April 1987)	3560-1150-150	Asia, eees.	and the state
tC, 3 stage (s)		:Q. <b>.9</b>	<del>ti</del> :	j til 2550	- <b>H</b> 203				Service Control of	
tF (s)	3,5	3.3	H	1 1,772	2.5	gyana 19	. 15 % · -	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 4 4 4
p0 queue free %	100	75	i kanahi un		100		14/200			
cM capacity (veh/h)	100	ે331				a de la composição de l		ر وائيل في تاجي في جاجي		∡., SP :
age: Study or 1911 State and advantage about the contract of the second contract of the contra			د ادارای کیکیت به بادورون در همان با	e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l La companya de la co	rain E. Wayyana			المگرفيات فيك ازاد المنظوطات الم حال الماري المسادر المنظوطات	134 . Liu - 175 . A46	See die Ereich in Lieuwer
Direction, Lane #	WB.1	NB 1	- NB 2	. SB 1∈	40. 7. 20.			The service of the se		PROPERTY OF THE PERSON OF THE
Volume Total		1411	729	~ 49°	186					11 - <u>4</u> Figur
Volume Left	0	0	0	0	0					
Volume Right	81		24		0	ym Háid	* 1 7		erfold task	
cSH	331	1700	1700	1700	1700					_
Volume to Capacity	0.25	0.83	0.43	0.11	. 19	93.949an0				
Queue Length 95th (ft)	24	0	0	0	0					
Control Delay (s)	19.4	0.0	0.0	0.0	0.0	ini di ana.	· == . · · · ·		₹.	
Lane LOS	40.4	0-0								
Approach Delay (s) Approach LOS	19.4	0.0	• • • ;	0.0		2.00				T 154.4
• •	U									
Intersection Summary				er yar sarta						
Average Delay			0.6							
Intersection Capacity U	ltilization		55.1%	- 10	CU Leve	el of Ser	vice	B		
Analysis Period (min)			15							
								*		1

	٦	<b>→</b>	7	•	<b>←</b>	•	*	<b>†</b>	<i>&gt;</i>	<b>\</b>	ļ	4
Movement =	EBL÷	EBT :	EBR	WBL	:WBT	≝WBR	≟ NBL-	NBT	NBR:	SBL-	-SBT-	≅SBR
Lane Configurations		4	7		- €			<b>↑</b> }			个个	
Sign Control	31. TA.	Stop	• •		Stop	Jan Jan		Free		2	Free	
Grade	•	0%			0%			0%			0%	
Volume (veh/h)	14.	123	366	. 39		391	0	1200	9	. 0	334	.0
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.85	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	18	40.00	458	46	0	460	. 0	1600	12	Ö	371	0
Pedestrians	•	2.54			7	. ,	. 7.	يث تر تر	:	,		•
Lane Width (ft)	e de la fag							1	143.		120	2 - L
Walking Speed (ft/s)									* *,			
Percent Blockage		4 4 44			3.00 A 40	Agriagija,	9.50		. 4 . 23.	Sant#is	V	
Right turn flare (veh)	• •					•				- V - 2*		
Median type	. Black	None		in suffered a	None		, +, 4 <sub>0</sub>	1. 44			Table of the	5.7
Median storage veh)		1 2 1 Was to \$ 25 1										Sole No.
Upstream signal (ft)	- F 1/2 4/2 -		gjaren.			grande k	4 44 4	1281	1.131.		1114	- 550
pX, platoon unblocked	0.86	0.86		0.86	0.86	0.86				0.86		
vC, conflicting volume	1631	1983	186	2326	1977		-:371	p	y Kaja Siy	1612	Page gar	- 24
vC1, stage 1 conf vol		* #r T.T'			7.5.1.44	25 77 65		7 7-		in the second		
vC2, stage 2 conf vol	isat 404	i da en en en en en en en en en en en en en	ara Ni		Nije	APT R		海田 み		Puğayı		
vCu, unblocked vol	1573	1980	186	2377	1973	617	371			1551		ACCUSE.
tC, single (s)		6.5	6,9	8.5	6.5	6.9	4.1		ويولون والانتاج	4.1	iair 🕸	
tC, 2 stage (s)	". · * » .	* 12-14-	****.	759.7	0.356.55 26.5		W Transfer			us markny	19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
tF(s)	3.5	4.0	3.3	4.0	4.0	3.3	2.2		r Lagrad	2.2		
p0 queue free %	Õ	0	45	0	100	0	100		28.485.2	100	* .** .	
cM capacity (veh/h)	is ±80 s	-54	825	0	54	378	1184	estat sil	- \$1\$ 3.50	366		A STATE
Direction; Lane #	EBIL	EB 2	WB 1	NB 1	NB 2	- SB 4	-SB 2	a n relimination of the				
Volume Total	171	458	506	1067	545	and the state of t	C. 1. N. N. L. S.				preton in the	
Volume Left	18		46	0		0	پورېزان	12, 7, 167		s <del>prijers</del> sje e sije	호텔 스턴트	
Volume Right	10  0 :	458 ·	460	0	_	_	-1-1 0 -1-1-1 0	1.00	1-0-36			34.7 CANT
cSH	Ō	825	0	1700	1700	1700	1700			or chief record	, fe kel	feafi tuli y
Volume to Capacity	Eπ	0.55	Err	0.63		0.11		ري چي. ري.	engii kaka		Station and	koj: kiĝ
Queue Length 95th (ft)	Err	87	Err		بر.ب 0	0	0	57 W F 24		**** - 11 1	-1	- 3*
Control Delay (s)	Err	14.7	Ērr	-		Q.Ō	~		gig again in the	ang a.	er er er er	
Lane LOS	F	В	F.		0.00	hate di <b>d (A.</b>	., , 0.0		r		. Taur	
Approach Delay (s)	-	_	•	0.0	en asa	0.0	eren	1.3		21413E	1.2	4
Approach LOS	F 1		F		1 1 43 AM		Partition of a			The second	* \$4	
• •			_ 100.15	* *1	Act of a substitute of		alida a san in 1987 to the co	B. 11. 4		Marine de contrar de co		
Intersection Summary			F editor (L.)		HE NAME OF			ALL DELINATION OF THE PROPERTY	18 - American - Americ		in Abi Ciden Statistics are	225 X 25 E
Average Delay	raja - uati - i		Err	i e	OHLL	or o						
Intersection Capacity U	tilization		77.0%	ili.	UU Lev	el of Se	rvice		D	* * .		<i>*</i>
Analysis Period (min)			15									
	4				5		7		•	÷		

<del></del> -	ℐ	<b>→</b>	*	*	<b>←</b>	1	•	†	<u> </u>	<b>\</b>	ļ	4
Movement	₹ <b>EBL</b> ≝	EBT	EBR	WBL	:WBT	WBR	NBL	NBT	NBR:	SBL	SBT	SBR
Lane Configurations					43-	•		474		·	<u>ተ</u> ኑ	
Sign Control		Stop			Stop	•		Free	;	1 9 2	Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	13	0	13	2	1196	0	0	739	· ` 0
Peak Hour Factor	0.92	0.92	0.92	0.80	0.80	0.80	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	Ô	0	16	0	16	3	1595	0		821	. 0
Pedestrians	•								4			
Lane Width (ft)	1. 11.	ŧ.º			, a - 1 - a		1.	10 100	41.1	i de la composición dela composición de la composición dela composición de la compos	400	18 . 1
Walking Speed (ft/s)											•	
Percent Blockage	gar dala		in a sign	4.65.1		erthy egy	ultiple	runt to	. 43 <b>54</b>		1 g 1	8 · .
Right turn flare (veh)				-		-						
Median type		None		Y at Y's	None		را يو. انها ان ان ان ان ان ان ان ان ان ان ان ان ان			Post (		J. J. 13
Median storage veh)	20 000	* 0 ****** 22			7 # . 25 ****							
Upstream signal (ft)	医毒素 一种					r Karrii		788	e digitale	*****		yr.
pX, platoon unblocked	0.81	0.81		0.81	0.81	0.81		8121.7	•	0.81		
	1640	2421	411	2011	2421	797	821		ort geg	4595	173 04	5 y-12
vC1, stage 1 conf vol	-2000							12.	•		•	
vC2, stage 2 conf vol	eraliye.	Bar Ellinati			海漏孔	e valgor		o Trans	TE KIB			
vCu, unblocked vol	1555	2520	411	2013	2520	514	821			1499		2.77. 17.4.
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1		onia.	4.1	<b>新主会部</b>	
tC, 2 stage (s)								, , , , , ,	144	,		• • • • • • • • • • • • • • • • • • • •
(F (s)	3,5	4.0	- 3.3	₹3.5	4.0	= 3.3	2.2			2.2	4.建 <u>课</u> 扩入	
p0 queue free %	100	100	100	43	100	96	100			100	•	
cM capacity (veh/h)	- 59	22	590	29	-22	± 413	- 81 <u>7</u>		t with	359		
Direction, Lane#	WB:1	NB1	NB2	- \$B.1≣	SB-2			e na canzarine Weige Paming N. Allegari				
Volume Total	32	534	1063	547	274				# 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ngo garaga		- 48 F-48
Volume Left	16	3	Ő	0	Õ							
Volume Right	16	· 0	- 0	. 0		033413	1 3.		74. P.	و المُعْلِقِةِ أَدْنَانِ	dan da	
cSH	53	817	1700	1700	1700			` -				
Volume to Capacity	0.61	0.00	0.63	0.32	0.16	garg <sup>ari</sup> t.	机械机		objekt.		At He	1.174
Queue Length 95th (ft)	61	Ō	0	0	0		•					
Control Delay (s)	146.2	0.1	0.0	0.0	0.0			52	hat et e		ja kai	1111
Lane LOS	F	Ä										
Approach Delay (s)	146.2	0.0		0.0			in the	-34		de en e	39 m. j.	- %
Approach LOS	F											
Intersection Summary				-Tibe lengt Triggering				A in all groundspaces	e. avec e			e7. si-c. d Compressor
Average Delay			2.0						The second secon		The state of the s	down and and the
Intersection Capacity Ut	ilization		44.4%	. 1	CU Lev	el of Se	rvice		Α		.*	
Analysis Period (min)	.=		15					••				
								+			;	
•					•			•				

	۶	<b>→</b>	*	•	4	4	4	†	<b>/</b>	<b>\</b>	<b>↓</b>	4
Movement	EBL	EBT.	EBR	∵WBL	-WBT	- WBR	NBL	≗NBT⊹	NBR	-SRI-	SBT.	SBR
Lane Configurations		4	<u></u>		3 000° 11 114 142 14	Allering personal and an	<u> </u>	<b>†</b> /}	Esta Establis		4 <sup>↑</sup>	
Sign Control		Stop			Stop			Free		1820 2	Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	Ó	0	0	0	. 0	0	1197	5	5	747	. 0
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.92	0.75	0.75	0.90	0.90	0.92
Hourly flow rate (vph)	2	0	0	0	0	ાં ≨ે 0ા,	0	1596	: 7	6	830	0
Pedestrians												
Lane Width (ft)		4.7 (C) F		ner en en		10 mg 40 mg	* **	**			- ": " " " " " " " " " " " " " " " " " "	
Walking Speed (ft/s)												
Percent Blockage	. f . 14	នេះស៊ីគិស្រាល	A British		1	w gan.						
Right turn flare (veh)		22.00										
Median type	. J. 1881. :	None			None							一大人意
Median storage veh)	i eksuli	- 7	51	Since agent for the co								
Upstream signal (ft)	0.70	0.70		9 70			Pali, c	* 501				
pX, platoon unblocked vC, conflicting volume	0.79	0.79 - 2444		0.79	0.79	0.79	000	5.4 c - 4.	and the same	0.79		
vC1, stage 1 conf vol	ાંહેર્સ	. 2444	4.1.5	~ ZUZ5	~Z44U	. 801	ี ช่วบ		P 85-3	1603		
vC1, stage 2 conf vol	435 <b>4</b> 5		in Nagarya S	and the Sattle		entrality of a re-	nga maga	95 - 142	9 - Angle 2 - 1	rider (j. 1801).	junga jiras	
vCu, unblocked vol	1546	2558	415	2032	2554	492	830	inera V	कुन्नी विकेतिक वर्ग जन्म	1500	TON MEN	
<del>_</del>		6.5		2032 ≅ 7:5		6.9	- 4.1	erdaalija	oswiejste zolit	4.1	ligge about	while was
tC, 2 stage (s)	ra- ogra <u>n</u> g-	Tors may light	· •	ent Hy		TOWNS !	क्षण विकास है। जनसङ्ख्या	つぎがんな まき		2000年1月19日		S# HAM
tF.(s)	3,5	4.0	ં3.3	3.5	4.0	3.3	2.2			2.2	ne este i	w
p0 queue free %	97	100	100	100	100	100	100	इंक्षा २ मी अहिन्द्रश्रा अर		98	A 1 B 2 14	1975-14 W. Tr
cM capacity (veh/h)	62	20	592	26	20		798		おり 発養 見		an engal.	1,8145
Direction, Lane #		iik inga	KIRO		- Chia		er i salatan isa. Manjatan ing		in a market of the second seco	in N <del>apazio</del> en 1 	green was some	in programme and the second
		NB 1	NB 2	-SB-1	SB-2							
Volume Total Volume Left	2	1064	539		553		in the					
Volume Right	2 0	0 0 .	0	6 - ಪ್ರಕರ್ಣಕ್ಕೆ	υ .ດ		t ii ta ii k			. જાલ્લા		3
cSH	62	1700	7 1700	360	1700	1 - 12-37-21			. 47 F. 18 T. C.			y Y
Volume to Capacity		0.63				il eo Si	ar - 135			leđelje pre	** **	المارية والمارية
Queue Length 95th (ft)	2	, <u>, , , , , , , , , , , , , , , , , , </u>	. U.UZ. 0	U,UZ 1		e jakarini i	16 in 66 in	1 (1 g	병 백 12		Jan Gragnia -	10 mgs
Control Delay (s)	64.6		-	0.6	_	1.32	المناز والمناز		re degasi.	9441		117 .8
Lane LOS	F	- F <b>494</b>	Ų.,Q	Α	,, <b>,</b>	77.			7 - T	, garti i i i i i i i i i i i i i i i i i i	Street, A	
Approach Delay (s)	64.6	್ 0.0	er a	0.2	ร์ลสตสา		<u> </u>	4.11		STE W	ridan By	
Approach LOS	F	. =	•	F								۔
Intersection Summary				er stæme	half apad same 8° 11						<u>Maria S</u> ocial de la	egrand 3d
Average Delay			0.1				erekizete.					Aper have
Intersection Capacity Uti	lization		ا .u 43.2%	4.	Chlicae	el of Se	rvice		· , a		A	
Analysis Period (min)	uraliou	* * !	43.4% 15	1	CO LEV	ei ∩⊬õ <b>e</b> i	IAIĆĠ		- A.			•
raidiyələ i orloc (rilli)		-	. 13									

	•				4	A.	•	†	<i>&gt;</i>	\ <u></u>	<u> </u>	1
Movement	. ≟FBIN	- EBT#	EBR	WBL	_WBT	WBR	ı NRI-	ı ∴NBT-	NBR	-SBE	¥ SBT	ZSBR
Lane Configurations		<u></u>	**************************************		4	<u> </u>	<u> - An Stat (7.</u>	<b>†</b> }	No in the second of the second	<u>ነ</u> ኝ	<b>†</b> }	<u> </u>
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	1500	1300
Total Lost time (s)	.0	4.0	4.0	- 5 -	4.0	1 <del></del> -		4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	•	•	0.95		1.00	0.95	
Ert	e jar	1.00	0.85		0,89	ala esta		1.00	19		1:00	i igiri
Flt Protected		0.95	1.00	*	0.99			1.00		0.95	1.00	
Satd. Flow (prot)	Left 194	1752	1776		1671	eria sign	·*;)	3564	3 L L &	1685	3445	
Flt Permitted		0.45	1.00	ž.	0.94	3.5		1.00	•	0.20	1.00	
Satd. Flow (perm)		827	1776	n 340	1580	13. B.		3564		355	3445	9 Jan 20
Volume (vph)	40	0	24	52	0	270	0	892	18	101	632	14
Peak-hour factor, PHF	0.50	0.50	0.50		0.85		-	0.87	0.87		_0.86	0.86
Adj. Flow (vph)	80	0	48	61	0	318	0.0,1	1025	21	117	735	16
RTOR Reduction (vph)	0		32	Ŏ	_				0.	0	3	. 0
Lane Group Flow (vph)	0	80	16	0	263	0	0	1043	Ö	117	748	0
Heavy Vehicles (%)	_	0%	0%	0%		: 0%		1%	_	0%	-1%	- 0%
Turn Type	Perm	<u> </u>	Perm	Perm	<u> </u>	<u> </u>	renga i Tirli.T	The State of	i i i i i i i i i i i i i i i i i i i	Perm	- part apply of Marc	. 405-A- 20
Protected Phases		4:			· · · · · · · · · · · · · · · · · · ·		5-48.c	<b>.</b>		NAME AND ADDRESS OF THE PARTY O	- 6	
Permitted Phases	4	\$1.55# 15 1 1 July 15	4	8	1 4 1 17 <b>17 1</b>	refault burg a fair	H. no is une			6	a s servició de a	SA F APPL
Actuated Green, G (s)		_14.3	14.3	. 43°	14.3		1940 m	23.0		23.0	23.0	
Effective Green, g (s)	73	16.3	16.3	the state of the	16.3	aseas a Chen	型 (多)	25.0	, upor ne	25.0	25.0	# 31 <u>2</u> 24 .
Actuated g/C Ratio		0.33	0.33			risišir	- A 6- 14 A 1	0.51	aurežija		0.51	12 1 25 . e-381e-33 2
Clearance Time (s)		6.0	6.0	· · · · · · · · · · · · · · · · · · ·	6.0	r rea	EST THE	6.0		6.0	6.0	\$5 × 134
Vehicle Extension (s)	estila k	2.3.0.	<u> </u>		3.0		A-1,111	3.0		3.0	≟ 3.0	- 35.
Lane Grp Cap (vph)		273	587	of of actions	522			1807	14 1. 20 20 21. 44	180	1747	2 3-4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
v/s Ratio Prot	÷.,,		₽.† 1411 ₽.† 1411			ografie i diggeste		0.29	4.34		0.22	کا (بہائ <i>ی</i> ۔
v/s Ratio Perm	, a	0.10	0.01		c0.17	<u> </u>	and of the co	0.20	, erTe	c0.33	~ <b></b>	region in a second
v/c Ratio	f	0.29	0.03		0.50	يوره في والي	in the si	0.58		0.65	0.43	
Uniform Delay, d1		12.2	11.1	files series	13.2	· •		8.5	~	8.9	7.6	
Progression Factor		1.00	1.00	. No engare	1.00	33 E E S	-35	1.00		1.00	1.00	Marie es
Incremental Delay, d2	=,	0.6	0.0		0.8			0.5		8.1	0.2	की है।
Delay (s)		12.8	11.2	1.1	14.0			8.9			7.8	April 1
Level of Service		В	В		В			Â		В	A	ā <sup>7</sup> ?
Approach Delay (s)	i di	12.2			14.0	Na 189	وأيهلوا والما	8.9	1, 5.	aa. Ā	9.1	
Approach LOS		В			В			Α			Α	
Intersection Summary	- Kitan Milawine	inic i naina addiwa Nii da naina adama Nii da naina adama				1000					CANADA SANTA	
HCM Average Control D			9.9		HCM Le	vel of S	ervice		Α			
HCM Volume to Capaci			0.59		* * * *				, š	٠	11 A	
Actuated Cycle Length			49.3			ost time			8.0			
Intersection Capacity U	tilization		67.0%	1	CU Lev	el of Se	rvice		C	15		
Analysis Period (min)			15									
c Critical Lane Group						**						.25

			·									
	۶	-	•	€	◄	•	*	†	~	-	ļ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR*	SBL	SBT	SBR
Lane Configurations	75	1>			सी	7		4		*	<b>f</b>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	11.2	4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.90	100	1.00	0.88	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1624	1835			1845	1812	100	1935	$x_{i+1} \leq \frac{\pi}{4}  \mathbf{v}_{i} ^{\frac{1}{2}}$	1787	1611	•
Flt Permitted	0.43	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	736.	£1835			1845	1812	G. W. Swig.	1935		1787	1611	i marka
Volume (vph)	203	186	1	0	70	706	0	1	2	688	4	16
Peak-hour factor, PHF	0.54	0.54	0.54	0.93	0.93	0.93	0.75	0.75	0.75	0.91	0.91	
Adj. Flow (vph)	376	344	2	0	75	759	Ő	1	3	756	4	18
RTOR Reduction (vph)	0	Ō.	. 0	0	0	0	0	. 3.	0	0	. 9	Ô
Lane Group Flow (vph)		346	Ó	0	75	759	Ô	1	0	756	13	0
Heavy Vehicles (%)	0%	0%	0%	0%	. 3%	1%	0%	0%	0%	1%	- 0%	0%
Turn Type	pm+pt			pm+pt		Free	Split			Split		<del></del>
Protected Phases	2-1-73	1.4.4	1.00	:3	8:3		2	2		## <b>!</b>	` <u>**</u> 1	
Permitted Phases	4		ŕ	8		Free						
Actuated Green, G (s)	20.3	20.3			4.2	71.4	lwišl.	₹ 0.6	<u>وَ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْمِنْ الْم</u> المُنْ الْمِنْ	32.5	32.5	1 W. T.
Effective Green, g (s)	22.3	22.3			6.2	71.4		2.6		34.5	34.5	
Actuated g/C Ratio	0,31	0.31	. 1		0.09	1,00		0.04	A Mary .	0.48	0.48	4,4% L4.
Clearance Time (s)	6.0	6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0_		و د د د چ چیسبه دانچیرت -	3.0		450	3.0	ा श्राप्त । } इंग्लंड क्रिक्ट क्रिक्ट के अंग्लंड के अंग्लंड के अंग्लंड क्रिक्ट के अंग्लंड के अंग्लंड के अंग्लंड	3.0	- 3.0	Argosta i
Lane Grp Cap (vph)	380	573	_	•	160	1812		70	·····	863	778	
v/s Ratio Prot	c0.17	0.19			0.04		4	0.00		c0.42	0.01	
v/s Ratio Perm	c0.14	•				c0.42						
v/c Ratio	0.99	0.60	2 1		0.47	0.42	4. 4 ° .	0.02		0.88	0.02	15 47 ×
Uniform Delay, d1	22.9	20.8			31.0	0.0		33.2		16.5	9.6	
Progression Factor	1.00	1.00		-2	1.00	1,00	· · ·	1.00	1.5	1,00	1.00	
Incremental Delay, d2	42.9	1.8			2.2	0.7		0.1		9.9	0.0	
Delay (s)	65.8	22.6			33.2	0.7		33.3	1 2	26.4	9.6	
Level of Service	Ė	C			Ċ	Α		C		C	A	
Approach Delay (s)		45.1			3.6	i griter	in de la companya di di di di di di di di di di di di di	33.3			26.0	ery entre
Approach LOS		Ď			À			C			C	
Intersection Summary					Garley H			ivi sest				The second second
HCM Average Control			23.9	1	ICM Le	vel of S	ervice		С			
HCM Volume to Capac	city ratio		0.85		٠		r Şer			٠.		
Actuated Cycle Length	(s)		71.4	(	Sum of I	ost time	e (s)		8.0			
Intersection Capacity U			69.4%			el of Se		÷	С			
Analysis Period (min)			15									
c Critical Lane Group	)						5.1					

	١	<b>→</b>	•	•	<b>+</b>	4	4	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	√SBL .	SBT	SBR
Lane Configurations		€}-			<u>-4</u> 7>		• "	€\$			€}	
Sign Control		Free		* *	Free			Stop	7	:	Stop	
Grade		0%			0%			0%			1%	
Volume (veh/h)	24	832	10	-10	678	36	6	0	6	102	0	26
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	26	914	11	11	729	39	7	-0,	7	120	0	31
Pedestrians											*	
Lane Width (ft)								171	4 i	45 10 3	r in the con-	
Walking Speed (ft/s)										•		
Percent Blockage		450	754									
Right turn flare (veh)										•		
Median type	i i sa f	144	100	ς.	Tak di di di			None	Page 1		None	5 ·
Median storage veh)										•		
Upstream signal (ft)		$v = \left( \begin{array}{ccc} v_{1}^{2} & v_{1} & \vdots \\ v_{n}^{2} & v_{n}^{2} & \vdots \end{array} \right)$	1	* *	984	4,.	18 2 T 18,28	. : *	1.3			8 11 11 11
pX, platoon unblocked												
vC, conflicting volume	768			925		1 - 18 1 E	1389	1762	920	1749	1748	384
vC1, stage 1 conf vol												
vC2, stage 2 conf vol =	Fl.F.		4		State of the		a İğeri	144. A		vig j		
vCu, unblocked vol	768			925	20 to 4 to 4		1389	1762	920	1749	1748	384
tC, single (s)	4.1		합의 구도	4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)					w · - ·							
tF (s)	2.2			2.2		1.714	3.5			3.5	4.0	. 25
p0 queue free %	97	4	5 2	99			93	100	97	0	100	95
cM capacity (veh/h)	855	11 J. 13		747	ಹಾಗಳ ಅಕ್ಕಿ . ಆಕಾಗುತ್ತಾರಗಳ		95	.⊹∴ 81.	. 277	. 53	83	620
Direction, Lane#	EB1	WB 1-	WB2	≓NB₌1₌	SB,1			and a second				
Volume Total	952	375	403	14	151						and the language of the langua	1578
Volume Left	26	11	0	7	120							
Volume Right	- 11	0	39	5 T	31		- A	sign of the	. 6 - 6 <b>2</b>	a magain		
cSH	855	747	1700	142	65					•		
Volume to Capacity	0.03	0.01	0.24	0.10	2,33	f . i.					\$ 1	1
Queue Length 95th (ft)	2	1	0	. 8	365							
Control Delay (s)	0.9	0.5	0.0	33.2	745.5		15	ing the second s		T - 1 -	. : ' ' - '	* 4.
Lane LOS	Α	Α		D	F							
Approach Delay (s)	0.9	0.2		33,2	745,5	1 1-	150	tie of the			>	·.
Approach LOS				D	F							
Intersection Summary				A CONTRACTOR		ujiti	eriki :					
Average Delay			60.0									
Intersection Capacity Ut	ilization		81.7%	. [	CU Leve	of Se	rvice		. : : D			
Analysis Period (min)			15				4, 7					

	۶	<b>→</b>	7	•	<b>←</b>	4	1	†	<i>/</i> *	<b>/</b>	<b>↓</b>	4
Movement	EBL+	EBT	EBR	WBL∗	WBT	WBR	NBE	NBT	NBR	-SBL	∴SBT⊯	SBR
Lane Configurations		<del>ી</del>	71	<b>*</b>	<b>*</b>	7		सी	7	¥	<b>}</b>	<u> </u>
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	-
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	1,00	0.85		1.00	0.85	1.00	0.97	£
Fit Protected		1.00	1.00	0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)		1756	1492	1624	1693	1454	:	1682	1561	1491	1776	
FIt Permitted		1.00	1.00	0.13	1.00	1.00		0.28	1.00	0.54	1.00	•
Satd. Flow (perm)	in The con-	1756	1492	228	1693	1454	4	491	1561	840	1776	10.30
Volume (vph)	0	580	360	177	381	72	317	34	219	199	92	26
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0.89	0.89	0.92	0.92	0.92	0.50		0.50
Adj. Flow (vph)	0	725	450	199	428	81	345	37	238	398	184	52
RTOR Reduction (vph)	0	0	139	0	0	37	0	0	34	0	13	0
Lane Group Flow (vph)	0	725	311	199	428	44	0	382	204	398	223	0
Heavy Vehicles (%)	0%	1%	1%	0%	1%	0%	1%	0%	0%	17%	0%	-0%
Turn Type	Perm		pm+ov	pm+pt		Perm	pm+pt		pm+ov	Perm		
Protected Phases	Ø M	- 6	ૈ -ુ 3.	5	<u> </u>	jiri	3∙	. 8	5.		: 14 -	
Permitted Phases	6		6	2		2	8		8	4		
Actuated Green, G (s)		24.0	30.5	38.8	38.8			24.0	32.8	11,5	11.5	SVIP.
Effective Green, g (s)		26.0	34.5	40.8	40.8	40.8		26.0	36.8	13.5	13.5	* ***
Actuated g/C Ratio		0.35	0.46	0,55	0.55	0.55		0.35	0.49	0.18	0.18	E Stage
Clearance Time (s)		6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	*
Vehicle Extension (s)		3.0	് . 3.0	3.0	3:0	3,0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		610	768	326	923	793		306	851	152	321	
v/s Ratio Prot	30 B	c0.41	0.05	c0.09	0.25			c0.14	0.03		0.13	. 5.4
v/s Ratio Perm			0.16	0.24		0.03		0.29	0.10	c0.47		
v/c Ratio		1.19	0.40	0.61	0.46	0.06		1.25	0,24	2.62	0.69	
Uniform Delay, d1		24.4	13.3	14.8	10.3	8.0		24.4	10.9	30.6	28.7	
Progression Factor	÷	1.00	1.00	1.00	1,00	1.00		1.00	1.00	1.00	1.00	B x
Incremental Delay, d2		100.5	0.4	3.4	0.4	0.0		136.1	0.1	747.0	6.4	
Delay (s)		124.9	13.7	18.2	10.7	8.0		160.5	11.1	777.6	35.1	e i
Level of Service		F	В	В	В	Α		F	В	F	Ď	
Approach Delay (s)		82.3			12.5		• : .	103.1	Section 1		501.2	
Approach LOS		F			В			F			F	
Intersection Summary					Control of the contro	e ca se sa			4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ráile		
HCM Average Control D	elay		155.3		1CM Le	vel of S	ervice		F	x	in a company	
HCM Volume to Capaci			1.43									
Actuated Cycle Length (		•	74.8		Sum of	lost time	e (s)		16.0			
Intersection Capacity Ut			86.6%			el of Se			E			
Analysis Period (min)			15						_			
c Critical Lane Group	14.4								:			

	•	<b>→</b>	*	1	4	· ·	*	†	<i>/</i>	<b>/</b>	<b></b>	4
Movement	EBL	₩EBT	EBR	WBL	WBT	-WBR	NBL	NBT	_NBR4	SBL,	SBT	SBR
Lane Configurations	**	€17∌			ની	7		4	7	<u> </u>	ર્લ	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95			1.00	1.00		1.00	1.00	* .*	1.00	1.00
Frt :		0.99		: "	1.00	0.85	:	1.00	0.85		1.00	0.85
Fit Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1,000	3526			1816	1561	en Tarri	1826	1615		1771	1830
FIt Permitted		0.75			0.96	1.00		0.74	1.00		0.74	1.00
Satd. Flow (perm)	i ij R <sub>ed</sub>	2659	0. <u>1. j</u> ulijski?	1	1753	1561		1413	1615	· Alesta L	1359	1830
Volume (vph)	179	783	36	12	422	16	25	6	11	24	6	183
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0,60	0.60	0.60	0.89	0.89	
Adj. Flow (vph)	201	880	40	14	496	19	42	10	18	27	7	206
RTOR Reduction (vph)	∞0	- 3	0	0.50	∛0	6	0	- 0	15	0	0	172
Lane Group Flow (vph)	0	1118	0	0	510	13	0	52	3	Ô	34	34
Heavy Vehicles (%)	0%	ા 1%	4%	0%	1%	0%	0%	0%	0%	4%-	∷ 0%	. 0%
Turn Type	Perm			Perm		Perm	Perm	•	Perm	Perm		Perm
Protected Phases		- 2	talayet.		- 6		Mirio.	ia: 4		e Allig	8.	44 AN.
Permitted Phases	2			6		6	4		4	8		8
Actuated Green, G (s)		34.0			34.0	34,0	各等自	6.6	6.6		6.6	6.6
Effective Green, g (s)		36.0			36.0	36.0		8.6	8.6		8.6	8.6
Actuated g/C Ratio		0.68			0.68	0.68		0.16	0.16		0.16	0.16
Clearance Time (s)		6.0			6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	gradin politica.	200 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200	3.0	3.0	ن <u>فأق منا</u>	3.0	3.0°.		3.0	1::3.0
Lane Grp Cap (vph)		1820			1200	1068	•	231	264		222	299
v/s Ratio Prot	e William ()							크림됐다	一点严重			
v/s Ratio Perm		c0.42			0.29	0.01		c0.04	0.00		0.03	0.02
v/c Ratio	\$ 三层岩	0.61	Adding to		0.42	0.01		0.23	0.01		0.15	0.11
Uniform Delay, d1		4.5			3.7	2.6		19.1	18.4		18.9	18.7
Progression Factor		1.00	1.		1.00	1.00		1.00	1.00	şî Li	1.00	1.00
Incremental Delay, d2		0.6			0.2	0.0		0.5	0.0		0.3	0.2
Delay (s)	***	5.1	v		3.9			19.6	18.5	Fr No	19.2	18.9
Level of Service		Ä			Α	Α		В	В		В	В
Approach Delay (s)		5.1		i king	3.9			19.3	3	35 July 1	- 19.0	
Approach LOS		Α			Α			В			В	
Intersection Summary			destriction form		Egynd addiod	is in No. 1 - Principles against management		<i>57425</i> 7	115-11-1			
HCM Average Control D			7.0	}	HCM Le	vel of S	ervice		Α			
HCM Volume to Capaci			0.54						-			
Actuated Cycle Length			52.6			ost time			8.0			
Intersection Capacity U	tilization		69.2%	Ī	CU Lev	el of Se	rvice		С			
Analysis Period (min)			15									
c Critical Lane Group						1.1						

	۶	<b>→</b>	7	*	+	4	4	†	<i>&gt;</i>	<b>\</b>	ļ	4
Movement	EBL -	EBT	EBR	WBL	∞WBT:	WBR -	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7	35		7		<b>†</b> \$			<b>^</b>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	13	13	13	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0	4.0		4.0		4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00		1.00		0.95			0.95	
Ent (		1.00	0.85	1.00	٠,	0.85		1.00			1.00	
Flt Protected		0.99	1.00	0.95		1.00		1.00			1.00	
Satd Flow (prot)	:	2138	1794	1243		1669		3570		5.828	3574	
Flt Permitted		0.99	1.00	0.62		1.00		1.00	•		1.00	
Satd. Flow (perm)	2	2138	1794	812		1669		3570	V 3.11		3574	الأنبيا أويد
Volume (vph)	14	123	366	39	0	391	0	1200	9	0	334	0
Peak-hour factor, PHF	0.80	0.80	0.80	0.85	0.85	0.85	0.75	0.75	0.75	0.90	0.90	0.90
Adj. Flow (vph)	18	154	458	46	0	460	0	1600	12	Ő	371	0
RTOR Reduction (vph)	0	0	307	- 0	÷ 0.	16	0	0	0	0	0	0
Lane Group Flow (vph)	Ó	172	151	46	Ô	444	0	1612	Ö	0	371	0
Heavy Vehicles (%)	2%	0%	2%	50%	.0%	0%	2%	1%	2%.	2%	1%	2%
Turn Type	Perm		Proto	ustom	Cl	stom		- • •				
Protected Phases	na ji Šasi	4	4			8		. 2			- 6	
Permitted Phases	4			8			•					
Actuated Green, G (s)		<b>2</b> 2.4	22.4	22,4		22.4		38.4	voj i š		38.4	ite yet
Effective Green, g (s)		23.4	23.4	23.4		23.4		39.4			39.4	
Actuated g/C Ratio	i tid	0.33	0.33	0.33		0.33		0.56			0.56	2.7
Clearance Time (s)		5.0	5.0	5.0		5.0		5.0			5.0	
Vehicle Extension (s)		3:0	3.0	3,0	19 ET	2_3.0_		3.0		i de la companya de l	::3:0	od od Provinski suprij
Lane Grp Cap (vph)		707	593	268		552		1987			1989	
v/s Ratio Prot	e et e e	NEG 1	0.08	2 (11)		c0.27	$\mathfrak{s} = \mathbb{J}^{n \times n \times n}$	c0.45		#10 # f j	0.10	:
v/s Ratio Perm		0.08		0.06				- 1			~ · · · ·	•
v/c Ratio		0.24	0.26	0.17	Harris Santage	0.80		0.81	100		0.19	garan e
Uniform Delay, d1		17.3	17.3	16.8		21.6		12.7			7.8	
Progression Factor	1.00	0.99	0.42	1.00		1:00 -		1.00	1 .		1.00	j.
Incremental Delay, d2		0.2	0.2	0.3		8.3		2.6			0.0	
Delay (s)	·	17.3	7.5	17.1		29.9		15.3	· .	SPECIAL	7.8	3-27
Level of Service		В	Α	В		С		В			Α	
Approach Delay (s)		10.1			28.8	<del>-</del>	9 14 A 30	15.3			7.8	- 4
Approach LOS		В			С			В			Α	
Intersection.Summary	S. C. C. Barrier St. C. C. Constant		A. Lateral III			To the second			iciów j	Car our Car	A TUBE	
HCM Average Control I	Delay		15.6	ŀ	ICM Lev	el of Se	ervice		В			
HCM Volume to Capaci	ty ratio	1	0.81	1.0							4.1	
Actuated Cycle Length	(s)		70.8	9	Sum of lo	st time	(s)		8.0			
Intersection Capacity U	tilization		74.9%	1	CU Leve	of Ser	vice		Đ	•		
Analysis Period (min)	•		15									
c Critical Lane Group	٠											

	٨	<b>→</b>	*	•	<b>←</b>	4	4	†	<b>/</b>	<b>\</b>	<del> </del>	4
Movement :: 32333	EBL	EBT.	EBR	WBL	WBT	WBR	<b>NBL</b>	- NBT	NBR	SBL	SBT	SBR
Lane Configurations			<u>. – </u>		4		*	<b>^</b>			<b>†</b> }	
Sign Control		Stop			Stop		•	Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	.0	0	0	13	0	13		1196	. = 0	.0	739	-0
Peak Hour Factor	0.92	0.92	0.92	0.80	0.80	0.80	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	16	0	16	3	1595	0	0	821	0
Pedestrians									i			
Lane Width (ft) Walking Speed (ft/s)			* .		2.3	•						
Percent Blockage	غرجي د					_a	t volume				4	8.
Right turn flare (veh)	1 142				,	1. 1. 1		; ·	E			
Median type	1 1	None		17.5	None			187.1		÷		
Median storage veh)	· · · · · · · · · · · · · · · · · · ·	*.i.40(i.c.		107 (	TACITO	·		·• ".	e especial		The second	
Upstream signal (ft)	u jaba	Name of the	ger Filip		i i realizada	, heat	Service Control	788	e gas		493	s -j≸sz,
pX, platoon unblocked	0.83	0.83	0.98	0.83	0.83	0.82	0.98	, কর		0.82		\$ 80 m
vC <sub>i</sub> conflicting volume	1640	2421	411	2011		797		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1595	1 <del>5</del> 3.	
vC1, stage 1 conf vol			• *	•							•	
vC2, stage 2 conf vol			C. Esta				SPLAK.		Á.	1. B.2.	4.35	
vCu, unblocked vol	1509	2454	386	1958	2454	532				1505	•	
tC, single (s)	7,5	6.5	- 6.9	7.5	6.5	6,9	4 1			4.1		持續重
tC, 2 stage (s)		e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	2.32	· 22 .	ere i dan ezer	e e le carlas	one and	_			4. a.	
tF (s)	3.5		11.5 (4.1.5)		197	" mail arment (ga-	2.2	4.5				
p0 queue free %	100	100	100	49	100	96	100	a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la co		100	or a company	art. e
cM capacity (veh/h)	- 66	25	603	32	25	408	817		*****	361	fran	
Direction, Lane #	WB_1	NB 1	NB 2	NB 3	\$ SB 1	SB 2					Partie e	
Volume Total	32	-3	797	2.00	547	- 274				e in the second		
Volume Left	16	3	0	0	0	0						
Volume Right	16		0	0		0						\$ 30
cSH	60 60	817	1700	1700	1700	1700		0				
Volume to Capacity  Queue Length 95th (ft)	0.55 55	0.00	0.47	0.47	- 00.	_0.16	for its				jan igr	
Control Delay (s)	122.2	0 9.4	0.0	0.0	0 ∴ ∩ ∩	0 0.0 ±≟∴		t				
Lane LOS	F	<i>э.</i> н А	0.0	U.U	0.0	: usta 1010						1 a m = 1
Approach Delay (s)	122.2		a ta B		: ::::::::::::::::::::::::::::::::::::	in Resid		200	asy is	g <sub>3</sub> 1944		
Approach LOS	F	0.0			9,0	7		1				
	•	Zarrytaa et al 1880	i in desemble i	Electrical			alama empara es	<del>di</del> ara	and the second second	e a lagration d	- 0	and the state of the second
Intersection Summary						r toren mest in						
Average Delay	ltiliaatiaa		1.6	1.	OH 1	-1 -4 C-						
Intersection Capacity L Analysis Period (min)	nuization		49.9% 15	Íï	ou rev	el of Se	i vice		Α	•		
∠⊓arkaia ∟eπon (mili)			19									

	<b>*</b>	<b>→</b>	7	•	4-	•	4	†	<i>&gt;</i>	<b>\</b>	<b>↓</b>	4
Movement	EBL	EBT	, EBR	WBL	WBT	:WBR-	NBL	-NBT	NBR-	SBL	- SBT	SBR
Lane Configurations		4						<b>†</b> \$		<b>)</b> %	ተተ	<u> </u>
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	0	0	0	0	0	.0	1197	5	-5	747	. 0
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.92	0.75	0.75	0.90	0.90	0.92
Hourly flow rate (vph)	2	0	. 0	0	.0	.0	0 -	1596	7	6	830	0
Pedestrians												
Lane Width (ft)				12.6	100	to the state	1 1 1				* -	
Walking Speed (ft/s)												
Percent Blockage		14	*	:	100	. /m:		$\int_{\mathbb{R}^{n}}  \Phi_{n}  = 1$	11		100	1.5
Right turn flare (veh)												
Median type	14.33	None	7 7 4 7 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	None					2.1		2 - 2
Median storage veh)												
Upstream signal (ft)	2.5		2 .	e Say		·	ter in the	- 501	122	ng jiya	780	÷. ·
pX, platoon unblocked	0.81	0.81		0.81	0.81	0.81				0.81		
vC, conflicting volume	1639	2444	415	2025	2440	801	830			¥1603	· : - : :	
vC1, stage 1 conf vol												
vC2; stage 2 conf vol								de gar		Page .	and the	
vCu, unblocked vol	1557	2545	415	2031	2541	527	830			1512		
	7.5	6.5	6.9	7.5	6.5	- 6.9	4.1			4.1	TAN IL	ilāt.
tC, 2 stage (s)		0.1 43.04.1					+ 2 2					
tF (s)	3.5		3.3	3:5	4.0	* 1,5\$\$ \$\frac{1}{2} \cdot \frac{1}{2} \cdot \fr	2.2	in the		2.2		
p0 queue free %	97	100	100	100	100	100	100			98		
cM capacity (veh/h)	63.	21	592	27	- 21	403	798			365		
Direction, Lane#	EB1	NB_1	NB.2.	SB1	SB 2	SB3		STATE STATE OF THE	energies de la company La company de la company			4.41TY TOWNS
Volume Total	2	1064	539	6	415	415			TASKA .	NAME OF STREET		
Volume Left	2	0	0	6	0	0						
Volume Right	:50	.0	·	.0.	t = 10.		19 m. 1 m			SA,		
cSH	63	1700	1700	365	1700	1700						
Volume to Capacity	0.03	0.63	0.32	0.02	0.24	0,24		4.44	in Section 1	$p\in \mathbb{R}^{n}$	· 100 - 100 - 1	数字 多相
Queue Length 95th (ft)	2	0	0	1	0	0						
Control Delay (s)	64.3	0.0	0.0	15.0	0.0	0.0	81 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		1 4	199	in Alberta (a. 12) 1 St	NTA SECTION AND A SECTION AND A SECTION AND A SECTION AND A SECTION ASSECTION
Lane LOS	F			C								
Approach Delay (s)	64.3	0.0		0.1	A Carry		G) 1 789				선물 기	
Approach LOS	F											
Intersection Summary			ng pirmip to 1975 Parities no transfer Parities, of the second	10.40 . 30.5 10. 30.93 . 3.5 10. 30.93 . 3.5 10. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.						juit		The very series
Average Delay			0.1									
Intersection Capacity U	tilization		49.9%	·I	CU Lev	el of Ser	vice	\$	Α		100	4, ,
Analysis Period (min)			15									•
									٠			

	۶	-	•	•	<b>+</b>	•	*	†	<i>&gt;</i>	1	<b>↓</b>	- ✓
Movement	EBL	EBT≕	EBR	WBL.	WBT.	-WBR	NBL	□NBT∈	NBR	- SBL	SBT	SBR
Lane Configurations		<u></u>	7*		4	7*		<b>†</b> p		*	<b>†</b> }	<u> </u>
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	11	11
Total Lost time (s)		4.0	4.0		4.0	4.0	v	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95		1.00	0.95	
Fit	. : -	1,00	0.85	-	1.00	0.85		1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1752	1776		1805	1615		3564		1685	3445	1.
Flt Permitted		0.72	1.00		0.70	1.00		1.00		0.20	1.00	
Satd. Flow (perm)	44.3.3	1323	1776		1339	1615	Wasanijaja	3564		363	3445	š
Volume (vph)	40	0	24	52	0	270	0	892	18	101	632	14
Peak-hour factor, PHF	0.50	0.50	0.50	0.85	0.85	0.85	0.87	0.87	0.87	0.86	0.86	0.86
Adj. Flow (vph)	80	0	48	61	0	318	Õ	1025	21	117	735	16
RTOR Reduction (vph)	0	• 0	**S 4	0	0	93	0	2	0 <	0	2	0
Lane Group Flow (vph)	0	80	16	0	61	225	0	1044	0	117	749	0
Heavy Vehicles (%)	3%	0%	0%	-0%	0%	0%	-0%	1%	0%	~ 0%	1%	<b>~ 0%</b>
Turn Type	Perm		Perm	Perm		Perm				Perm		
Protected Phases		3.4			7.8						- 6	# 10 A
Permitted Phases	3 4		3 4	78		78				6		*
Actuated Green, G (s)		22,7	22.7		22,7	22.7		<i>-</i> 39.3		-39.3	39.3	Sarrada -
Effective Green, g (s)		24.7	24.7		24.7	24.7		41.3		41.3	41.3	-
Actuated g/C Ratio		0.33	0.33		0.33	0.33		0.56		0.56	0.56	
Clearance Time (s)								6.0		6.0	6.0	
Vehicle Extension (s) 🦟			4.5	idin ye	Lagar			. 3.0		3.0	3.0	
Lane Grp Cap (vph)		442	593		447	539		1989	142	203	1923	
v/s Ratio Prot							i i i i i i	0.29	321		0:22	·
v/s Ratio Perm		0.06	0.01		0.05	c0.14				c0.32		
v/c Ratio		0,18	0.03		0.14	0.42		0.52	\$a` ∃	0.58	0.39	tion of the second
Uniform Delay, d1		17.5	16.6		17.2	19.1		10.2		10.7	9.2	
Progression Factor	mga ninga-	1.00	1,00	. 1	1.00	1.00	建 数层 计	1.45	444.	1.00	1,00	
Incremental Delay, d2		0.2	0.0		0.1	0.5		0.2		3.9	0.1	
Delay (s)		17.7	16.6		17.3	19.6	i i i i	15.0		14.6	9.4	
Level of Service		В	В		В	В		В		В	Α	
Approach Delay (s)	1. 1. 1. 1. 1.	17.3	PERSONAL PROPERTY.		19.2	and the second	7-14-65	15.0	ani di	, sila	10.1	
Approach LOS		В			В			В			В	
Intersection Summary	Paris American	Physical is not	i din a			MANUAL Y ASK ST	garaji	pe villere		naidhe le		
HCM Average Control D	elay		14.0	ŀ	ICM Le	vel of S	ervice		В			
HCM Volume to Capacit	y ratio		0.52		. 7 ""		Art in the		<u> </u>			
Actuated Cycle Length (	s)		74.0	9	Sum of I	ost time	(s)		8.0			
Intersection Capacity Ut	ilization		55.3%	10	CU Lev	el of Se	rvice		В			
Analysis Period (min)	•		15									
c Critical Lane Group					٠.				\$			

	۶	-	*	<	4	4	1	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	4
Movement	a EBL⊈	EBT	EBR	WBL	WBT	WBR	-NBL	- NBT-	-NBR	≤SBL-	SBT	SBR
Lane Configurations	*	ĵ.			4	7		4		ነኝ	1>	<u>~~~±±₽</u> }
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0	•		4.0	4.0	\$	4.0	* .	4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Frit 1	1.00 -	1.00			1,00	0.85		0.90		1.00	0.88	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1624	1835	187		1845	1812	w. w.	1935	1 1	1787	1611	1000
Flt Permitted	0.51	1.00			1.00	1.00		1.00		0.95	1.00	•
Satd. Flow (perm)	875	1835			1845	1812	it objekt	1935	ى ئۇرىيا	1787	1611	7 F
Volume (vph)	203	186	1	0	70	706	0	1	2	688	4	16
Peak-hour factor, PHF	0.54	0.54	0.54	0.93	0.93	0.93	0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	376	344	2	Ö	75	759	Ö	1	3	756	4	18
RTOR Reduction (vph)	∮0	0	0	· • • • • • • • • • • • • • • • • • • •	(0)	0	*	3	0	0	9	0
Lane Group Flow (vph)	376	346	0	0	75	759	Ô	1	0	756	13	0
Heavy Vehicles (%)	0%	0%	0%	-0%	3%	1%	∹0%	0%	. 0%	1%	0%	0%
Turn Type	pm+pt			pm+pt		Free	Split	·		Split		<del></del>
Protected Phases	7a	. 4		3.	. 8		. 2	· 2 .	San San J	-1.1	1. 13. 1.	
Permitted Phases	4			8		Free				1.9 <sub>0</sub> , 3		
Actuated Green; G (s)	22.7	15.2			8.4	74.0		0.3	特持權用	33.0	33.0	<b>美国</b> 克里
Effective Green, g (s)	24.7	17.2			10.4	74.0		2.3		35.0	<b>3</b> 5.0	
Actuated g/C Ratio	0.33	0,23	Milita.	e is in	0.14	1.00	Mari	0.03		0.47	0.47	2 JA 2
Clearance Time (s)	6.0	6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s) -	3.0	3.0			3.0	E.S.A.Sa		3,0	ي فق أي	3.0	3.0	A Saria
Lane Grp Cap (vph)	396	427		-	259	1812		60	-	845	762	
v/s Ratio Prot	c0.13	0.19	A	- 1 - 1,24	-0.04		yr iBu	0.00	3.4	c0.42	0.01	
v/s Ratio Perm	c0.18					c0.42						
v/c Ratio	0.95	0.81	ar in the		0.29	0,42		0.02	ang Maria	0.89	0.02	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Uniform Delay, d1	22.9	26.9			28.5	0.0		34.8		17.8	10.4	
Progression Factor	1.00	1.00		15%	1:00	1.00	J. T.	1.00	18 B	0.60	0.17	
Incremental Delay, d2	32.1	11.1			0.6	0.7		0.1		11.4	0.0	
Delay (s)	55.0	37.9			29.1	0.7	100	34.9	F 14 - 525	22.0	1.8	* 1 - 5 - 1
Level of Service	D	D			С	Α		C		C	Α	•
Approach Delay (s)		46.8		•	3.3			34.9	- 5 .	, N. J.	21.4	
Approach LOS		D			Α			С			C	
Intersection Summary						UPSHAROUTA TA				rijaryek:	CASIMPANTAL	
HCM Average Control D	elay		22.8	}	ICM Le	vel of S	ervice		С	<u></u>	-1-12.30.1-0.1	Her Spendary
HCM Volume to Capaci			0.86					;		1.3		
Actuated Cycle Length (			74.0	9	Sum of I	ost time	(s)		8.0			•
Intersection Capacity Ut			69.4%		CÚ Lev				C			
									_			
Analysis Period (min)			15									

	≯		7	•	*	4	1	†	<b>*</b>	<b>\</b>	ļ	1
Movement	EBL:	EBT	EBR	WBL.	WBT	WBR	NBL	NBT-	NBR	SBL	SBT-	SBR
Lane Configurations		4			414		*****	44			4	
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	12	12	11	11	12	12	12	12	12	12
Grade (%)		0%		1	0%			0%			~ 1%	. *
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor	42 - 4 1 - 3	1.00	17 .		0.95		1	1.00		in a spella	1.00	
Frt		1.00			0.99			0.93			0.97	
Flt Protected	*	1,00			1.00			0.98			0.96	*
Satd. Flow (prot)		1939			3428			1729			1768	
Flt Permitted		0.97	IT I		0.94			0.88			0.76	
Satd. Flow (perm)		1887			3233	s Maria de la casa de		1558		, o sp. s. s. s.	1398	- L
Volume (vph)	24	832	10		676	38		0		102	<u> </u>	26
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	26	914	11	111.		41		0		120	4. <b> </b>	31
RTOR Reduction (vph)	0	1 ```~~~~	0	. 0	5	0	0	6	0	0	14	0
Lane Group Flow (vph)	0	950	0	0.0	774	0	0		competition for c	. 0		<u>.</u>
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	<u>0%</u>
Turn Type	Perm		HE KIND F	Perm			Perm			Perm		
Protected Phases		2 ::::::::::::::::::::::::::::::::::::	er in sylvini		ರ ತಿಲ್ಲಾಗಳು	kija ir sibili	- 1.55° . <b></b>	<b>4</b> 그런 구하	gallywaat coree			e <b>da</b> n Internation
Permitted Phases Actuated Green, G (s)	. Z	42.1	की उपर्विका <del>र</del> ्के न	0-	42.1		3 - 344	9.8		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.0	著: [4]
Effective Green, g (s)	siin, sii a	43.1	: .	Electronia.		e kājā	a disability	9.6 10.8	erich in der se		9.8 10.8	
Actuated g/C Ratio	"Juman jariga igi	0.70	Fee of the		0.70	na salgura	nation refige	0.17		001#37 1912	0.17	JA ≃s (N)
Clearance Time (s)	Anglighter dien di	5.0	ا انجا ہے '' وقع د	والمراجع والمارات	= 5.0					. <u> </u>	5.0	Gerling appear
Vehicle Extension (s)		3.0			3.0	i <del>dis</del> ti bi min est		3.0	19E 1114 T T 1 T 4	a strategy in	3.0	
Lane Grp Cap (vph)		1314			2251	two as a sa		272	1-12(12)	1987 - 1986 Told	244	Special T
v/s Ratio Prot		عا الله حَمَّاتِ	•		** <del>***********************************</del>	##* (- <del>                                     </del>	Biri er saktır sak	4 1, <b>4</b> 904	ಗಳಿಗಳಾಗಿ -	d september		(1941) 1 H (1)
v/s Ratio Perm	la a sala a ka	c0.50	e salar salar	ajan, sat.	0.24		- 200 A 15	- 0.01.	12 2 X	idėma.	c0:10	
v/c Ratio	14, 1 × 1 1 2. 14	0.72	r. y		0.34	i na in ne	7,	0.03	ina en ja	de are,	0.56	: # · · · ·
Uniform Delay, d1		5.8	* · · · ·		3.8	i Notae		21.2	d * 1,74%		≟ 23.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2	Page 12	2.0			0.1	inie i s	· · · · · · · · · · · · · · · · · · ·	0.0			2.9	
Delay (s)		7.8			3.8	• •		21.2			26.3	
Level of Service		A			≆ A		S. PASS	C			್ಷ ೯	g
Approach Delay (s)		7.8			3.8			21.2			26.3	
Approach LOS	NE Har.	A		phan E.	Α	5 음악.		, - , <b>- · C</b>			C	
Intersection Summary	Gerai								MINE TO STATE OF	Charles and the		
HCM Average Control [			7.7	}	ICM Le	vel of S	ervice		Α	71 T. 1	la .	
HCM Volume to Capaci			0.69	=		: %						
Actuated Cycle Length			61.9		Sum of	lost time	e (s)		8.0	18 12 81		
Intersection Capacity U			81.7%			el of Se			D			
Analysis Period (min)	· · · · · ·		15		- 1	* . * :			A. 1 - 1 - 1 - 1 - 1		w in	
c Critical Lane Group												

	۶	>	*	•	+	1	*	†	<b>*</b>	<b>\</b>	ļ	4
Movement	_EBL:	EBT	EBR	WBL	WBT	-WBR	NBL	NBT	- NBR	SBL	≲SBT⊭	∍SBR
Lane Configurations	·	个个	7	¥5	<b>†</b>	7	<b>ች</b> ኘ.	7>		青	7>	
Ideal Flow (vphpi)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	9	9	12	10	12	11	12	12	12
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Fit:		1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.97	1 : 3
Fit Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd, Flow (prot)		3336	1492	1624	1693	1583	1668	1649		1770	-1802	: J. //
Flt Permitted		1.00	1.00	0.18	1.00	1.00	0.39	1.00		0.65	1.00	
Satd, Flow (perm)	w. 15/1	3336	1492	316	1693	1583	689	1649	پاکستان کی این این	1202	1802	Se et ad e
Volume (vph)	0	580	360	177	381	72	317	34	219	199	92	26
Peak-hour factor, PHF	0.92	0.80	0.80	0.89	0.89	0.92	0.92		0.92			0.92
Adj. Flow (vph)	Ô	725	450	199	428	78	345	37	238	216	100	28
RTOR Reduction (vph)	0	0	311	0	0		0.5	202	` <u>`</u>	0	15	- 0
Lane Group Flow (vph)	0	725	139	199	428	38	345	73	Ô	216	113	Ô
Heavy Vehicles (%)	2%	1%	1%	0%	1%	2%	-1%	2%	0%	2%		2%
Turn Type			Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases		6			· 2			3-13-13			₹: <b>7</b> -:	eri
Permitted Phases	. 4	· · · · · · · · · · · · · · · · · · ·	6	2	time 1 21 j	2	3	in the Frank at 184	THE PERSON	7	al i yek sasistendê li kil	APT 1.1 .#FFT 1 :
Actuated Green, G (s)		19.6	19.6	-31.8	31.8	. 31.8	24.6	8.6		15.8	4.2	No.
Effective Green, g (s)		21.6	21.6	33.8	33.8	33.8	28.2	10.6	y Constitution	19.8	6.2	**
Actuated g/C Ratio		0,31		0.48	0.48		0.40		14 JAPA			4.4.
Clearance Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3.0	3.0	3.0	3.0	3.0	3.0				3.0	
Lane Grp Cap (vph)		1029	460	306	817	764	529	250	2-1-8-1-1-8-8-2-	450	160	
v/s Ratio Prot		0.22		c0.08	0,25		c0.17		. Hj. \$1. 24		0.06	raj
v/s Ratio Perm		- 17 Tays 1	0.09	c0.24	47.757.44	0.02	c0.10			0.04	. S. 12. 12.	1
v/c Ratio		0.70	0.30	0.65	0.52		0.65	0.29	No a Bal	0.48	0.71	
Uniform Delay, d1		21.4	18.5	12.4	12.5	9.6	16.0	26.4	,	20.5	31.0	7 7
Progression Factor		1.00	1.00	0.92	0.94	0.74	1.00			1.00		1 18
Incremental Delay, d2		4.0	1.7	4.7	2.3	0.1	2.9	0.7		0.8	13.4	
Delay (s)	ψ <sub>2</sub> *-	25,4	20.1	16.1	14.0	7.3	18.8		14. 14	21.4		<u>.</u>
Level of Service	-	C	С	В	В	Α	В	С		C	D	
Approach Delay (s)	170 - 411	23.4	11 - 1 - 1 - 1 - 1	·	13.9	$\mathcal{P}^{(p)} = \mathcal{J}_{(p)}^{(p)}$	马热	22.5		4. P.	29.9	415
Approach LOS		С			В			C	- 1	s '	C	
Intersection Summary			Andria year	Maria de					:-214444- <u>4</u>			2 2 27
HCM Average Control D			21.6	I	ICM Le	vel of S	ervice		С			
HCM Volume to Capacit			0.63				1 1		•	٠.	7	
Actuated Cycle Length (			70.0		Sum of I	ost time	e (s)		8.0			
Intersection Capacity Ut	ilization		65.5%		CU Lev	el of Se	rvice		C		3.22	
Analysis Period (min)			15									
c Critical Lane Group												

	۶		*	*	+	*	1	†	<i>/</i>	<b>/</b>	<b>+</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	-WBR	- NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ન ે			<b>€</b> 1}	·		€	<u></u>	-	<del></del> सी	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0		•	4.0			4,0	4.0		4.0	4.0
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	1.00
Frt		0.99			0.99	. 1		1.00	0.85		1.00	0.85
Flt Protected		0.99			1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)		3526			3434	. 1	•	1826	1615		1771	1830
Flt Permitted		0.74			0.92			0.74	1.00		0.74	1.00
Satd. Flow (perm)		2637			3166	i Hairwi	ياء أثني عليو	1413	1615	A. Garage	1371	1830
Volume (vph)	179	783	36	12	422	16	25	6	11	24	6	183
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.60	0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	201	880	40	14	496	19	42	10	18	27	7	206
RTOR Reduction (vph)	0	2	0	0	2	ે0	0	. 0	16	0	Ö	177
Lane Group Flow (vph)	0	1119	0	0	527	Ô	Ō	52	2	Ò	34	29
Heavy Vehicles (%)	.0%	1%	4%	-0%	. 1%	ઃ≛⊹0%⊹	0%	0%	- 0%	4%	€0%	0%
Turn Type	pm+pt			Perm	-		Perm		Perm	Perm		Perm
Protected Phases	5	2			6		Main.	- 3 4			8	
Permitted Phases	2			6	,		4		4	8	140 1.51-59	8
Actuated Green, G (s)		50.3			50.3			7.7	7.7		. 7.7	-7.7
Effective Green, g (s)		52.3			52.3			9.7	9.7		9.7	9.7
Actuated g/C Ratio	- 186 g	0.75	Tage of the second		0.75	i nerves		0.14	0.14		0.14	0.14
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	1.4	3.0	د در این از این از این از این از این از این از این از این از این از این از این از این از این از این از این از ای	1	3.0			3.0	3.0	garagas megg	3.0	3,0
Lane Grp Cap (vph)		1970			2365	•		196	224		190	254
v/s Ratio Prot	- 4. SP			6,		(4 - 5 t)		7			400	\$ - 75
v/s Ratio Perm		c0.42	•	•	0.17			c0.04	0.00		0.02	0.02
v/c Ratio		0.57		. A	0.22			0.27	0.01	4 8.E	0.18	0.11
Uniform Delay, d1		3.9			2.7	•		27.0	26.0		26.6	26.4
Progression Factor	1	1.10	en er Egit en er		1.00	th 34 (L)	· 	1.00	1.00	15	1.00	1 00
Incremental Delay, d2		0.3			0.2			0.7	0.0		0.5	0.2
Delay (s)	- 1. -	4.6	i e		2.9	£ \$	•	27.7	26.0	7 T	27.1	26.6
Level of Service		Α			Α			C	С		Ĉ	C
Approach Delay (s)		4.6	100		2.9	:	100	27.3		60 m 40 m	26.7	
Approach LOS		Α			Α			Ĉ			С	•
Intersection Summary		i i sale Tu	Altait:		Fig. 614.	111					etice / 1910	71 .51 155 112 - 17 17 17 17 17 17 17 17 17 17 17 17 17 17 17
HCM Average Control [			7.6	}	HCM Le	vel of S	ervice		Α			
HCM Volume to Capaci	ity ratio		0.52		1.5	***					٠,	
Actuated Cycle Length	(s)		70.0	5	Sum of I	ost time	e (s)		8.0			
Intersection Capacity U	tilization		58.9%			el of Se			• в			
Analysis Period (min)			15									
c Critical Lane Group										٠.		

General Information	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<del>.</del>	Cito Ind	formation				· · · · · ·
			Site in	rormation	1			
Analyst	MDN CME,		Intersec	tion	······································	Enterprise	Dr/Rt 19:	9 WB O
Agency/Co.		VBONnb29pm	Jurisdict			Town of L	llster, NY	
Date Performed	6/18/2009		Analysis	s Year		2029 No-	Build	
Analysis Time Period	PM Peak		<del>-</del>					
Project Description 09	-024d, Ulster Te	ech Citv	<u> </u>	*				
ast/West Street: Route			North/Sc	outh Street:	Enterp	rise Drive		
ntersection Orientation:	North-South			eriod (hrs):				••••
Vehicle Volumes an	d Adjustme	nts	•	-			· · · · · ·	
Major Street	T	Northbound				Southbou	nd	
Movement	1	2	3		4	5		6
		Т	R		L	Т		R
/olume (veh/h)		489			04	303		
Peak-Hour Factor, PHF	1.00	0.90	1.00	0	.66	0.66		1.00
lourly Flow Rate, HFR veh/h)	0	543	0		57	459		0
Percent Heavy Vehicles	0				1	_		
Median Type		· - r	,	Undivided		<u> </u>		
RT Channelized			0					0
anes	0	1	0		0	1		0
Configuration		T		,	LT			
Jpstream Signal		0	1			0		
Minor Street		Eastbound	·			Westbou	nd .	
Movement	7	8	9		10	11		12
	L	Т	R		L	T		R
/olume (veh/h)		·				<u> </u>		-
Peak-Hour Factor, PHF	1.00	1.00	1.00	1	.00	1.00		1.00
Hourly Flow Rate, HFR veh/h)	0	0	0		0	0		0
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
lared Approach		N	<u> </u>		<del></del>	N		
Storage		0				0		
RT Channelized			0					0
_anes	0	0	0		0	0		0
Configuration								
Delay, Queue Length, a	nd Level of Se	rvice						
Approach	Northbound	Southbound	V	Vestbound			astbound	
Movement	1	4	7	8	9	10	11	12
ane Configuration		LT						1
/ (veh/h)		157				<del>                                     </del>	· · · · · · · · · · · · · · · · · ·	<del>                                     </del>
C (m) (veh/h)		1031				<del>                                     </del>		+
//c		0.15	<del></del>			+		+-
95% queue length		0.54	-			<del></del>	<del></del>	+
Control Delay (s/veh)						<del> </del>		-
		9.1			· · ·	<del>- </del>		-
LOS		Α				<del> </del>		
Approach Delay (s/veh)							· · · · · · · · · · · · · · · · · · ·	
Approach LOS								

	٦	<b>→</b>	7	•	+	•	*	<u>†</u>	<i>*</i>	<b>\</b>	Ţ	<b>→</b>
Movement	EBL-	EBT :	EBR	WBL	-WBT	-WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	77							<b>^</b>		<u></u>	4†	: 12 July 12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	14	12	12	12	12	12	14	12	12	12
Total Lost time (s)	4.0			100	- *			4.0			4.0	
Lane Util. Factor	0.97							0.95			0.95	
Frt 1	1,00		-					1.00			1.00	
Fit Protected	0.95		•					1.00	*		0.99	
Satd. Flow (prot)	3735		, e +			e e e e e e e e	4 July 20	3574			3557	4
Flt Permitted	0.95	<i>#</i>						1.00			0.80	
Satd. Flow (perm)	3735				1.	u grana in Radio	ş.	3574	11. V	والمراكبين	2852	ja saas
Volume (vph)	126	0	0	0	0	0	0	867	0	44	325	
Peak-hour factor, PHF	0.84	0.84	0.84	-	_	0.92	_		0.81		0.90	
Adj. Flow (vph)	150	0	0.0.3	0	0.02	0	0	1070	0	49	361	, 'n,àĝ U
RTOR Reduction (vph)	<b>0</b>	- 15 O 5	î÷ 0	_		<i>&gt;</i>	_		ം ഭാര്മം	· 0	301	U Oe≨∵∵
Lane Group Flow (vph)	150	0	0	0	0	n	Ô	1070	0		410	1 ( A U.
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	1070	•	_	- 10 - 1% <u>-</u>	_
Turn Type	Prot		2.70	2.70		: <u>,= /0</u> ;;	<u> </u>	- 1 \$55 t f <b>X</b> 0	, .: . <u>:</u> 4.70 <sub>2</sub>	Perm	\$ #£1.70 €	<u>.::⊕:<b>∠</b>∺/0</u>
Protected Phases	Δ.		A Brazilia	1 / / 1 - V	ukuetukai	a Baringan	agatiş il	ં સ્ટેક્	. #45 1	r em	- C	
Permitted Phases	·	47-1. <u>4</u> 317-1014	i Athendii —	는 - 10년 의 한 년 -	1980 Per 197	Maring of frequence	) (	rijin jega jega jega jega jega jega jega jega	不 (特数 (4))		* - * O -	
Actuated Green, G (s)	7.0	e. Istori	S 0 (%)	. 425 FB				28.6		o Zasta Os	28.6	f anglesing
Effective Green, g (s)	9.0	* 1****	en film	twent of	23 F 1 7 71 6 7	Property of	Thursday and the	30.6	1.8% -5.	- 17 April 17	30.6	
Actuated g/C Ratio	0.19		Berling.	- 1232	95%	1815 Su	1:32-1:34	0.64	3 6 12 3	.04 y y.	0.64	43.5
Clearance Time (s)	6.0		esta de la companya de la companya de la companya de la companya de la companya de la companya de la companya	1,50		· *=# * * 1 2	្យាទីលើសិសិស 	6.0			6.0	201640
Vehicle Extension (s)	3.0	e an e a	ig i jas			ngi sya		3.0°			0.0 ، 3.0 نياز	w.X
Lane Grp Cap (vph)	706	mination of the second of the second	August 1990 and 1892 in	er e Mediener (12 fr. 12	in or market	Marie Constitution	ik seker jungs di sekerdiran	2298	er jeg spike stijder i megel	er attenta er egile	1833	- Targing - Life
v/s Ratio Prot	c0.04							c0.30	4 9 3		1000	
v/s Ratio Perm	00.0.1						v 1.	: CO. 20:	1.12		0.14	1 11
v/c Ratio	0,21			der eine	5 <u></u>	1. 1. <b>2</b> 15	0.25	0.47	e e e e e e e e e e e e e e e e e e e		0.14	11.24
Uniform Delay, d1	16.3				ă., ·	Fulfit d	.94	4.3	* * * ±	125	3.5	1, 12
Progression Factor	1,00	1 45° LB			in the second	entrita.	125 41	1.00	.4	, t = 1 w	3.0 1.00	
Incremental Delay, d2	0.2	: " '-		. 5	₩. 		eg Kiloma	0.2		T 1	્રાયુપ્ 0.1	
Delay (s)	16.5	- v - 1		2	11.1		¥1 41	4.5	tak kuju		3.6	
Level of Service	В					2 11		Δ.		•	۸	. '= -
Approach Delay (s)		16.5			0,0.	3,4,13	4 1	4.5	9 1		3.6	
Approach LOS		В			A		** ; 7	Δ	* .	,	A	
Intersection Summary	i ekîrî	i ihekita	. Trika z An	le de Tir e	delve vije				le som il	a. Par	A Albana da An	er al PHIL
HCM Average Control D	)elav		5.4	<u></u>	ICM Lo	vel of Se	n dec		<u> </u>			FEAT FILE
HCM Volume to Capaci			0.41		ICIVI LE	vei UI SE	NICE		Α			
Actuated Cycle Length (	•			c	um of b	net time	(c)			. 1		
Intersection Capacity Ut			47.6 50.1%			ost time			8.0			
Analysis Period (min)	mzativii			į,	SO LEVE	el of Ser	VICE		Α			
c Critical Lane Group			15									
C Onlinear Earle Gloup						•						

	•	* 1	<i>&gt;</i>	<b>\</b>	<b>↓</b>			
Movement		WBR≢ NB	T NBR	SBL	SBT			
Lane Configurations	ሻ	<b>*</b> *		ኻ	<b>*</b> *			en en en en en en en en en en en en en e
Sign Control	Stop	Fre			Free	A .		
Grade	0%	0.9	6		0%			
Volume (veh/h)	2	_11 103	8 2	4	321	E		
Peak Hour Factor	0.50	0.50 0.7	5 0.75	0.90	0.90			** ***
Hourly flow rate (vph)	4	22 138	4 3	4	357	51 to 1	90 V.	
Pedestrians								
Lane Width (ft)		The state of	•	1.47				<ul> <li>Young the state of</li></ul>
Walking Speed (ft/s)								
Percent Blockage			<u>.</u>	BR AT				
Right turn flare (veh)				_				
Median type	None					144	ari radi	
Median storage veh)								
Upstream signal (ft)					721			
pX, platoon unblocked		ರ್ಷ-೧೯೮೪ :	÷	2002 - N				
vC, conflicting volume	15/3	693		1387			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
vC1, stage 1 conf vol	raus man a	o denotation in Robert			Service and all of	aran -		
vC2, stage 2 conf vol			S. Pa					
vCu, unblocked vol	1573	693	of the contract	1387	nata Seu 1986 Alexus	mana and a second of the		and the second
tC, single (s)	6.8	<b>1/3</b>		4.8			的情况。	
tC, 2 stage (s)		≅ 6°E∓.:	lay diga	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	evele o sier 4	ಚಿತ್ರಗಳು <u>ಸಾ</u> ಚಿತ್ರಗಳು ಕ	The second second second second second second second second second second second second second second second se	r kasa ikan ang ara
tF (s) p0 queue free %	3.5 96	94				경기 내용 경기 기가 기가 기가 기가 기가 기가 기가 기가 기가 기가 기가 기가 기가	12 12 12. 11. 도착	
cM capacity (veh/h)	102	343	ton ne	99 356	a sassasinin <u>ab</u> a	tal t	en la central de la companya de la companya de la companya de la companya de la companya de la companya de la c	8 2 · *
			A STATE OF THE STATE OF					
Direction, Lane#	WB 1 V	VB2 NB	1=-NB-2	SB:1;-	SB 2 SB	3		
Volume Total	4	22 92	3 464	4	178 17	78		
Volume Left	4		0 0	4	0	Ö		
Volume Right	0		0 ු3			Ō		
cSH	102	343 170		356	1700 170			
Volume to Capacity	1.00	0.06 0.5		0.01	0.10 0.	10		
Queue Length 95th (ft)	3		0 0	1	0	0		
Control Delay (s)	41.8	16.2 0.	0.0	15.2	0.0	1.0		
Lane LOS	- E	C .	•	С				
Approach Delay (s)	20.2	· 0.	U	0.2				
Approach LOS	U							
Intersection Summary	And the second s	ita (2007) (20). Ta da en en en						ilm chush, "Prendalat Gil appropriation de la lace
Average Delay		0.	3				No. of Continues	
Intersection Capacity Ut	ilization			CU Level	of Service		Α	
Analysis Period (min)		* ** · · · · ·	5		e, 19.5		•	
	÷							
							•	

	۶	<b>→</b>	7	•	+	*	•	†	<i> </i>	<b>\</b>	<b></b>	7
Movement	i EBL	EBT:	EBR	WBL	WBT	WBR	⇒NBL	- NBT	NBR -	SBL	SBT	SBR
Lane Configurations		<b>†</b>			44			<b>^</b>			↑↑	
Sign Control	i '	Stop			Stop			Free	4 5		Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1	0	2	.0	- 2	0	1038	0	0	323	0
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	0	2	. 0	. 4	0	4	0	1384	.0		359	0.00
Pedestrians												Ū
Lane Width (ft)			4.1			-14	v 4		. 1 3 3.	1114	45 1 g	
Walking Speed (ft/s)	. *						-		•			
Percent Blockage		atolija	182	1	- 4		- 200	4 2 9		eg a sy	3.543 N. 13	
Right turn flare (veh)			·		٠				·	e i e i e i e e	121 .	
Median type		None	- 134		None		e Silita		13.55		A Land	4 4
Median storage veh)		199 717 4177					* * *		774 74 1		47 11 11 11 11	:
Upstream signal (ft)	a Sign	e Projekt		) a <del>2</del>	4.494			1281	70.40 (4).		1114	· ·
pX, platoon unblocked	0.94	0.94		0.94	0.94	0.94		48.		0.94	****	4
vC, conflicting volume	1055	1743	179	1564	1743	692	359	asy official	ا مۇدۇرەن	1384	g Fran	445.4
vC1, stage 1 conf vol		** -					1. 1. 200. 200.		- 73	್ಕಳ್ಳುಕ್ಳುತ್	eren a din	,814 PT
vC2, stage 2 conf vol			in the state of th					为				31 - Y -
vCu, unblocked vol	995	1727	179	1537	1727	609	359	s - 20-5	e an er den i i	1345	SERT CARLS - F	. 400 / 1
tC, single (s)	7.5	6.5	6.9	8.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	7. 2			•		:	m 6 10 11 days - 150			A CHAIN SOUND M	Angles and of	
tF(s)	3.5	4.0	3.3	4.0	4.0	3.3	22			2.2		er er Er ev
p0 queue free %	100	98	100	91	100	99	100		1100 1 -1	100	at a miles of a	* * *
cM capacity (veh/h)	185	84	832	46	84	417	1196			478		44 L.S.
Direction, Lane #	EB1	WB1	NB 1	∞NB 2	SB 1	SB 2						
Volume Total	2	8	923	gr. , , ,	Vincing to the second s	179				7-14 (4) (4) (4) (4) (4) (4) (4) (4) (4) (4		
Volume Left	0	4	0	0	0	0		िंगी करीड़िक		San Arra		\$1.1
Volume Right	10:	4	_	0	_	•	edras 1		. =		ing garden in	Service .
cSH	84	83	1700	1700	1700	1700	일. 국민 - 11 (A) - 1	ः विशेष्टिः (दर्ग	72 Fibys (144)		Magner -	af st.
	0.02			0.27		£0.11			in dian	£	Alexander -	
Queue Length 95th (ft)	2	8	0	0.21	0	U	Tale (Astro-		2 November 1971	50 m - 1	rate in the	: -:
	48.8	_	_	0.0	_	(0,0	\$1. I		4 julia	et di L	1, 8, 11 -	4.15.4
Lane LOS	F	F	у <b>О</b> ,.О	. 0.0.	99	· * ( O.O .			.3 _	200	· y	4 4
Section 1.3. As a compression of the compression of	48.8	: 53:0	0.0	, <del>.</del> .		· NATION L	. B . E.	·	iga er	n se transition de	Sara B	
Approach LOS	E	F	5.5			#1 *1	til til e	. 1 · · ·		1. 1.5	ta itan ira	**
Intersection Summary		-in and ever	T- 447		ALL OF MACHINE			gháin sá bhair - Fei	letinii.			. The Le
Average Delay	Andrew St. At The	reinter († 1981).	0.3					The state of the state of		Transference	Page Company (Company)	
Intersection Capacity Ut	ilization		38.7%	17	റില് ക്ഷ്	el of Sei	nice		÷Α			
Analysis Period (min)	meanói l		30.7 <u>70</u> 15	į,	an réil	ar Oi OGI	VICE		Α			
			13									

ካ ተ ↓	, <b>%</b> J	4	7	
Movement NBL NBT SE	3TSBR	SEL	SER	
Lane Configurations **	<b>A</b>		7	
Sign Control Free Fre		Yield	!	
the state of the s	%	0%	-	
Volume (veh/h) 0 1038 33	25 0	·	361	
Peak Hour Factor 0.75 0.75 0.9		0.84	0.84	
Hourly flow rate (vph) 0 1384 36	31 0	e <sup>100</sup> 0€	430	
Pedestrians				
Lane Width (ft)			14.9	
Walking Speed (ft/s)				
Percent Blockage	No.	3.0 S.F	patrick and	
Right turn flare (veh)			•	
Median type		Raised	Mild .	
Median storage veh)		0		
Upstream signal (ft) 1096 129	99 - 11			日本 医氯 医环路霉 电导致对效率
pX, platoon unblocked		0.89		
vC, conflicting volume 361		1053	181	
vC1, stage 1 conf vol		361		•••
vC2, stage 2 conf vol		T COO 5,114 9		
vCu, unblocked vol 361	un oraș feri suces	934	181	water the contract of the cont
(C, single (s) 4.1		6.8	6.9	
tC, 2 stage (s) tF (s) 2:2		5.8	eren izen ez	The contractive and the contractive contractions.
The control of the co		3.5 c	The second section	· 医克里克氏病 医克克克氏病 医克克克氏病 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤
p0 queue free % 100 cM capacity (veh/h) 1194	4 9 5 1	100	48	
civi capacity (venini) = 27 1194		271	~834	
Direction, Lane #NB-1_NB 2_SB	1 SB 2	SE1		
Volume Total 692 692 18	31 181	430	evi iv	
Volume Left 0 0	0 0	0		
Volume Right 0 0	0 0	430	Projekt (	
cSH 1700 1700 170	00 1700	834		•
Volume to Capacity 0.41 0.41 0.4	11 0.11	0.52	17179 E 1278	현실 대통생활 10대 전원 1대 1대학 경기 등 본 교육 등
Queue Length 95th (ft) 0 0	0 0	75		
	0.0	13.8		
Lane LOS		В		
	.0	13.8		熟的现在分词复数保险 医多数
Approach LOS		В		
Intersection Summary				
	.7	A LAME TORY		
Intersection Capacity Utilization 38.0		Clileve	Inf Ser	rvice A
	70 K	LONG	ا من موز	(vice
		-		en et en en en en en en en en en en en en en

		<del></del>				5.5 * * * * * *						
	•	<b>→</b>	->	•	<b>←</b>	•	4	<b>†</b>	<b>/</b>	-	<b>↓</b>	1
Movement	EBL	≢EBT	EBR	WBL	-WBT	WBR	NBL	- NBT≉	NBR	SBL	_SBT_	SBR
Lane Configurations					4		·	41			<b>^</b> }	
Sign Control	7-1	Stop			Stop			Free		51	Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	<b>.</b> 0	0	0	1	0	1	2	1037	.0	. 0	686	0
Peak Hour Factor	0.92	0.92	0.92	0.50	0.50	0.50	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	: :0:		- 0	2	0	2	3	1383	00	0.50	762	0.30
Pedestrians	27			. –						ŷ		·
Lane Width (ft)	J. 1953	43	1	ar e vi	¥	Sec. 1		s igati	d (.	4 E 2 F 1 F		57 48
Walking Speed (ft/s)								**				•
Percent Blockage	14.4 14.4	"快"。		134.75	- 활박, 기의	÷, ± ,	1.3° 11'	1 :- 1	1 1 2 2	(14. sight)		eta i,
Right turn flare (veh)								, ,			- 1 1	
Median type	a isha	None	erina erina. Proper	in the	None	44, .	1 A. L.					
Median storage veh)					* (40.40.0043)	-	* 15,		-			. 19,4
Upstream signal (ft)	· Tital		**************************************	- 13 A 13	ENG. 43	Ng garata	1 1555	788	स्त्री			\$
pX, platoon unblocked	0.87	0.87		0.87	0.87	0.87	,			0.87	2	in production
vC, conflicting volume	1461	2150	381	1769	2150	691	762	. Wally		1383	数.表.	42.34
vC1, stage 1 conf vol										es, commi		474
vC2, stage 2 conf vol -		readije		Total						2017		
vCu, unblocked vol	1381	2173	381	1735	2173	497	762	F. 4 9"	A 1.4.	1291		-
tC, single (s)	7.5	6.5	6.9	7.5	6.5	- 6.9	4.1			4.1	<b>建工工学</b>	
tC, 2 stage (s)												
tF (s)	# 44 mg / 24 mg	4.0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3.5	4.0	3.3	2.2		살고 나는	- 2.2		A City
p0 queue free %	100	100	100	96	100	100	100			100	* *	. 4-12
cM capacity (veh/h)	89	40	617	50	. 40	456	859			464		- <u>(X</u>
Direction, Lane#	- WB 1	NB 1	NB 2	SB.1	SB-2	Liary						
Volume Total		464	922	508	254	A STATE OF THE STA				marky des		
Volume Left	100 翻網	3 3 3	- <u></u> 0	0	204	e general e Baj				.కేశ్వే		
Volume Right	2	_	. 0	_			32-11-2	ur gra	ng gen		Za go.	
cSH	90	859	1700	1700	1700	7,54	100 PFP	~4¥~i		200		
Volume to Capacity	0.04			0.30		- 74		er lager j	r Sign	42.		
Queue Length 95th (ft)	3	0.00	, F.O. O.		ር ሃላነዊ በ	. 1						
Control Delay (s)	46.9	•	•	•	0.0		e a titu a, t	14.1	4 41			
Lane LOS	E	A	. 0.0		<b></b>			· -: .	. **	7.7.		** 2.
Approach Delay (s)	46.9	÷ 0.0	412°	- 0.0		. He	1 18	5.4 y	. 4	e est i		
Approach LOS	E	2.7.5		,,,,,	. *		1				****	Ts Ex-
Intersection Summary	ifet Pug	Euglie ist				TRATELINA		_755da.krt.t				ly deviser.
Average Delay	raction of the race		0.1	era organic i I		ระบามตัว <u>ส</u> ัสรั			111 12 M 1. C . T		erthe Pi	11.20
Intersection Capacity U	tilization		40.1%	1	CU Leve	aliof Said	vioo		A			
Analysis Period (min)	mzáńn		15		ON FRAG	a or ogr	AIGE .		А			
indigoto i ortog (mili)			13									

	<b>≯</b>		*	<b>√</b>	<b>←</b>	4	1	<b>†</b>	<i>*</i>	<b>\</b>	<del> </del>	4
Movement	- EBL	EBT:	EBR	WBL	WBT	WBR	NBL	- NBT	NBR	- SBL	SBT	SBR
Lane Configurations		4						<b>†</b> ‡			41	******
Sign Control		Stop	111	* 5.4	Stop		1 g	Free			Free	
Grade		0%		-	0%	•	•	0%	·		0%	
Volume (veh/h)	1	0	0	0	0	0	0	1038	1	-0	686	0
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.92	0.75	0.75	0.90	0.90	0.92
Hourly flow rate (vph)	2.	0	0	.0	0		0	1384	1	0.00	762	
Pedestrians				•			,			•		: ~ · <del>9</del>
Lane Width (ft)	F-1 - 9	in In ci			in interest	Sept. For		.43	· 142			· ( v.i
Walking Speed (ft/s)											** **	3
Percent Blockage		in the			weight is	t ( W).	.wijai.			5 3 5	t 20 gr	
Right turn flare (veh)							•			• • •	, ,	;***** ****
Median type		None	. I faç		None				ALESSE			
Median storage veh)										•		
Upstream signal (ft)		THE REP	4.					501				MA
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
VC, conflicting volume	1454	2148	381	1766	2147-	693	762		W. S.	1385	争取销	
vC1, stage 1 conf vol	-3 931 Laues	tan an e e										
vC2, stage 2 conf vol			- <u>T</u> inan	Valencia.			Am 44 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	趣 2至		r Varese.		
vCu, unblocked vol	1359	2173	381	1725	2172	466	762			1279		
tC, single (s)	7,5	6.5	6.9	. 75	6.5	6.9	4,1	# J#		4.1		
tC, 2 stage (s) tF (s)	SU ASSESS	e e Santo		SPERKEL	on matrix <b>fil</b> te	unio salezaro	n national de les		*:=\5 : · · · · ·	97 TA.		
p0 queue free %	3.5	the state of the s	-3.3	3.5	4.0	3.3	2.2			2.2		
cM capacity (veh/h)	98 - 93	100 - 39	100	100	100	100	100		Q 2 2 2 1 12 1	100		
	90	<i>∴</i> 39 ⊆	623	49	39	463	846			468		म् प्रकार स्थापनारम्
Direction, Lane #	EB 1	NB1	NB 2.	SB_1	SB 2	at in E				1111:		
Volume Total	2	923	463	254	508		क कार्य करें ये -वें	HAZI N.BI	7 1962 7 81		100	
Volume Left	2	0	Ö	0	0			200		****	. "	7300
Volume Right	0	<u>.</u> 0 ·	<u>.</u> 1.	- 4 0	0		高级等	사 출판 경	<u>.</u>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
cSH	93	1700	1700	468	1700					T T		
Volume to Capacity	0,02	0.54	0.27	0.00	0.30				Company (See		n sa giwan y	E . 27
Queue Length 95th (ft)	2	0	0	0	0							
Control Delay (s)		0.0	0.0	0.0	0.0					181		- 2
Lane LOS	E											
Approach Delay (s)	44.6	0.0		0.0				**		1.	i i i i i i i i i i i i i i i i i i i	. 2
Approach LOS	E											
Intersection Summary	ribe	wari iya (xifi i	- 65 C	i i Servici si								iga garanta
Average Delay			0.0				* ( * * * * * * * * * * * * * * * * * *	2402707218487	a (di _180) (170 (di))			त्र-विक् <b>ष</b> ्ट्रम¥्
Intersection Capacity Util	ization	3	38.7%	40	CU Levi	el of Ser	vice		A A			
Analysis Period (min)		_	15	-		, <del></del>			2,3			•

			··			·						
	۶	-	7	•	←	*	4	<b>†</b>	<i>&gt;</i>	<b>\</b>	Ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		eĵ.	#		4			<b>†</b>		75	<b>↑</b> }	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	11	11
Total Lost time (s)	1.20	4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00			0.95	÷ .	1.00	0.95	•
Frit Sees 1	11	1.00	0.85		0.93	43.		1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.98			1.00	, M.	0.95	1.00	f
Satd. Flow (prot)	1. 1. 1. 1.	1760		3.	1723	igant japne	4	3568		1685	3445	grogačej je
Flt Permitted		0.76	1.00		0.80	TN '		1.00	. '	0.22	1.00	J
Satd, Flow (perm)	1 1 m		1776		1418			3568		395	3445	a as
Volume (vph)	46	1	28	23	0	26	0	967	11	5	667	15
Peak-hour factor, PHF	0.50	•		0.50	0.50	-	_		0.87		0.86	
Adj. Flow (vph)	92	2	56	46	رېږي 0	52	, io.o	1111	0.0 <i>1</i>	0,60 6	776	0.86
RTOR Reduction (vph)	0			10 10	_		_			-	776	17
Lane Group Flow (vph)	0	94	10	Q	- ਹੁਤ 55	0	į 0	1123	0	6	e	0
Heavy Vehicles (%)	-	- 0%	0%	0%		. 0%	_	1123	_		791 1%	0 ₩0%
Turn Type	Perm	₩ <b>0</b> 20	Perm	Perm	O	şa,-t, «O. Şojaş	· · · · · · · · · · · · · · · · · · ·	1.70	U /0_3		= 3.1.70	<u> </u>
Protected Phases	T 10 10 10 10 10 10 10 10 10 10 10 10 10	4		Feiiii A A	A co	Alid I Jacky	e Europa	് ക്ര	80 ಸಹಿತಗಳು	Perm	en alika en en en en	a was e
Permitted Phases	단한 165년년 <b>/</b>		1 \$10.491 \$5 <b>1</b>	ମ କଣ୍ଡିଆରୁ ଓଡ଼ିଶ୍ୱ Ω	Tan Fr						6	
Actuated Green, G (s)	<b>구</b> 최 : 왕왕최왕	7.2	7.2	<b>8</b> 원화되트웨	£7.2	inger (deser-	ko sovenski ba	ெற∦்த்`்	ua Dagarija	ნ : ი≉.∌*ა	erena en en	
Effective Green, g (s)	8 - \$142 P	9.2	9.2	र किया है	9.2		Fig. and	34.7 36.7		34.7	502.30	
Actuated g/C Ratio	THE SE	0.17	0.17	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	0.17	\$180 miles	و روده	0.68	1 33 254	36.7 0.68	36.7	. 815 A
Clearance Time (s)		6.0	6.0	هيئي چيد	6.0		T Street	6.0			0.68	\$1.1.15·
Vehicle Extension (s)	Çermet fa	3.0	3.0	A. S.	0.0 :3:0:		y Vilatorija	3.0		6.0 - 3.0	6.0	e est
Lane Grp Cap (vph)	-5	238	303	tig they represent the	No contract the second		a magnificant Calegraphy			Age of the Contract of the Con	- comments of the same	्रीसेशकाः <u>।</u> तहा
v/s Ratio Prot		∠30			242	i daya da i	š	2429		269	2346	
v/s Ratio Perm		c0.07	0.01	141	0.04	Waling a	*	c0.31	يُعْمُ رَبُّ السِّ		0.23	
v/c Ratio			0.01	1.0 Az	0.04	g the second	12 84	6.46		0.02		
Uniform Delay, d1		19.9	18.6	" 53	0.23		Mijusa -	0.46		∠0.02	0.34	1.4. 4
Progression Factor		1.00			19.3			4.0		2.8	3.6	
Incremental Delay, d2	5 . 4.2°		1.00	æ	1,00			1.00		- C		
Delay (s)	9.1	1.1 21.0	0.0		0.5 19.8	a Provincia		0.1		0.0	0.1	
Level of Service		:24.0 C	18.7	- 17	1 101	[시] : 1	•	4.1		2.8	3.6	
Asset 1777 MAT 1977 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			В		В	ARTON III		— A 		Α	. A	
Approach Delay (s) Approach LOS	37 - A 17	20.1	}		19.8	12.00		4.1	Profit is		3.6	
	J. = . ≤≥. <u></u>	ال المناطقة		e sellete	+::::	entrellar 10-2 compe	40 exemp.	Α			Α	
Intersection Summary					. T 1.32				Mary 37 (1915)			STATES
HCM Average Control D			5.8	F	ICM Le	vel of Se	ervice		Α			
HCM Volume to Capacil			0.45				ei .		* }	* - * * * * * * * * * * * * * * * * * *		
Actuated Cycle Length (	(S)		53.9			ost time			8.0			
Intersection Capacity Ut	ilization		43.3%	:[1	CU Lev	el of Ser	vice		Α			
Analysis Period (min)			15									
c Critical Lane Group						- *						

	۶	<b>-</b>	*	•	<b>←</b>	4	4	†	<u> </u>	<b>\</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	-WBR	= NBL	NBT	- NBR≛	SBI	SBT	SBR
Lane Configurations	*	<b>}</b>			4	7		4		<b>*</b>	ĵ,	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0			4.0	4.0	والمراجع والمحارف	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00	2	1.00	1.00	
Fit 188	1.00	1.00			1.00	0.85		0.90		1,00	0.88	
Fit Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1624	1835	1.	100	1845	1812	4.7	1935		1787	1616	ą ·
FIt Permitted	0.47	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	804	1835	a to year	ۇسا ئەزىرى	1845	1812	# 2 X 4	1935	ورواهان الأكل		1616	9 1 <del>6</del> 71
Volume (vph)	236	216	1	0	82	741	0	1	2	695	5	18
Peak-hour factor, PHF	0.54	0.54	0.54	0.93	0.93	0.93	0.75	0.75	0.75	0.91		0.91
Adj. Flow (vph)	437	400	2	0	88	797	0	1	3	764	5	20
RTOR Reduction (vph)	0	0	0	, O	0	0	0	3	Ö		10	~ <u>~</u> 0
Lane Group Flow (vph)	437	402	0	0	88	797	Ô	ĩ	Ő	764	15	0
Heavy Vehicles (%)	0%	- 0% -	0%	0%	3%	1%	0%	0%	0%	1%	0%	0%
	pm+pt			pm+pt		Free	Split			Split		
Protected Phases		4		<b>3</b> 3	8		: <b>: 2</b> :	2				
Permitted Phases	4			8		Free			-		re en ven	1 1997 F
Actuated Green, G (s)					6.2	75,1-	热量網	0.6	\$ 356 <b>第</b>	34.6	- 34.6	: 50 5
Effective Green, g (s)	23.9	23.9			8.2	75.1		2.6		36.6	36.6	) ###\$ E
Actuated g/C Ratio	0.32	0.32	i North		0.11	1.00		0.03	<u>2</u>	0.49	0.49	e i i de la constitución de la c
Clearance Time (s)	6.0	6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)			والمناهجين والمرادة	and especial	3,0			- 3.0	. y 4 5	3.0	3.0	
Lane Grp Cap (vph)	384	584			201	1812	-	67		871	788	
v/s Ratio Prot	c0.18	0.22		F - 177	0.05			0.00	لير (	c0.43	0.01	4 1
v/s Ratio Perm	c0.18					c0.44						
v/c Ratio	1.14	0.69	s		0.44	0,44	100	0.02		0.88	0.02	į.
Uniform Delay, d1	24.3	22.3			31.3	0.0		35.0		17.2	10.0	Ì
Progression Factor	1.00	1.00		• .	1.00	- 1.00		1 00		1,00	1.00	44
Incremental Delay, d2	89.1	3.4			1.5	8.0		0.1		9.9	$\tilde{0}.\tilde{0}$	
	113.3	25.7			32.8	0.8		35.1	1 7 2 1	27.1	10.0	s
Level of Service	F	C			C	Α		D		С	A	
Approach Delay (s)	\$ 11,177	71.4		•	4.0	Andrew Sharp Andrews	5- F	35.1	- , <i>3</i> 5		26.6	
Approach LOS		Ε			Α			D			Ċ	
Intersection Summary			li e e e			TO THE PARTY OF TH						inia Mark
HCM Average Control D			33.6	H	ICM Le	vel of Se	ervice		С			
HCM Volume to Capacit			0.91				7		1.50	5		
Actuated Cycle Length (			75.1			ost time	` '		8.0	•		
Intersection Capacity Ut	ilization		71.6%	10	CU Lev	el of Ser	vice		C			
Analysis Period (min)			15									-
c Critical Lane Group												

	•	-	•	•	←	*	•	<b>†</b>	<i>&gt;</i>	<b>\</b>	ļ	1
Movement + -	EBL	EBT	EBR	. WBL	WBT	-WBR	NBL	= NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7	ች	*	7		4	7	*		
Ideal Flow (vphpl)	1900	1900	1900	1900		1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4.0	4.0		4.0	5. T.		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	. :		1.00	1.00	1.00	1.00	
Fit 1		1.00	0.85		1.00			1.00		1,00	1.00	
Flt Protected		1.00	1.00	0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)		1756	1492	1624		aja e s	v	1673		1491	1837	, a
Flt Permitted	. 5,7	1.00	1.00	0.13	1.00			0.45	1.00	0.61	1.00	
Satd, Flow (perm)		1756	1492		1693	67.332	Au Jay	788	1.561	951	1837	1.44.
Volume (vph)	0	513	380	206	389	<u> </u>	360	2				<u>. 2 </u>
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0.89		0.92		254	7	5	0
Adj. Flow (vph)		641	475	231	the second of the second	1.00		0.92	0.92	0.50		0.50
RTOR Reduction (vph)	0 - 30	100			437	0	391	2	276	14	10	0
Lane Group Flow (vph)	11 4 1000	1.12.1.27.2	203				Ò	0	45		0	0
	0 *::::00/:::	641	272	231	437	0	0	393	231	14	10	0
Heavy Vehicles (%)	0%_	1%		0%	> 1%					17%	- 0%	<u> </u>
Turn Type	Perm		pm+ov	. 5	and the same	and their property of the con-	pm+pt		pm+ov	Perm		
Protected Phases		. 6	100	∮ in	2		3	· * 8	<b>1.45</b> -		4	
Permitted Phases	6	our secure	6	2	outer of the	2	8		8	4		
Actuated Green, G (s)			41.0					-27.6		4.6	4.6	
Effective Green, g (s)	The second sections	26.0		41.0	41.0			29.6	40.6	6.6	6.6	
Actuated g/C Ratio		0.33	25.0	0.52	Friends Strategies			0.38	0,52	-0.08	0.08	
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3,0			3.0	3.0	3.0	≟ 3.0	
Lane Grp Cap (vph)		581	930	314	883			511	886	80	154	····
v/s Ratio Prot		c0.37	0.07	-c0.10	0.26		athij5	c0 19	0.04		0.01	Sec
v/s Ratio Perm			0.11	0.28		* .		c0.10	0.11	0.01	VII 1, 15	
v/c Ratio		1.10	0.29	0.74	0.49			0.77	0.26	- 0.17	0.06	
Uniform Delay, d1		26.3	8.6	16.3	12.1			21.5	10.6	33.5	33.2	
Progression Factor	· 545	1.00	1.00	1.00	1.00	isatja -		1.00	1.00	1.00		1 (1 - 1 €
Incremental Delay, d2		68.8		8.7	0.4			6.9	0.2	1.0	0.2	Programme (State)
Delay (s)		95.1		24.9			44	28.4	10.8		33.3	Briggia I
Level of Service	•	F	A	С	В			C	В	. OO	00.0	
Approach Delay (s)	19 (2143)	58.4			16.8	3 8 3		21.1		i en egy i e	34.0	
Approach LOS		E	:		В			C			C	*.*
Intersection Summary≝			Earther				ing Fili					
HCM Average Control D			36.9		HCM Le	vel of Se	ervice		D			
HCM Volume to Capaci	ty ratio		0.89			.57.1 to 7.19					7	
Actuated Cycle Length	(s)		78.6	;		ost time	(s)		12.0			
Intersection Capacity Ut			84.2%			el of Ser			E			
Analysis Period (min)			15		. — ·		*.* <del>*</del>					
c Critical Lane Group												

	<b>*</b>	<b>→</b>	*	<	4	1	•	<b>†</b>	<i>/</i>	<b>\</b>	<del> </del>	-√
Movement	EBL	EBT	EBR	WBL	WBT.	WBR	NBL	· NBT	NBR	SBL	SBT	SBR
Lane Configurations	<del></del>	41>			€	7		स	7		€1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95			1.00	1.00		1.00	1.00		1.00	1.00
Frit 1990 1990	1	0.99			1.00	0.85		1:00	0.85	- "	1.00	0.85
Fit Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)		3508	-		1816	1561		1827	1615		1768	1830
Flt Permitted		0.75		•	0.97	1.00		0.74	1.00		0.73	1.00
Satd. Flow (perm)		2656			1756	1561	\$ - 4. E.	1405	1615		1338	1830
Volume (vph)	176	556	42	13	364	18	29	7	12	31	7	202
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.60	0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	198	625	47	15	428	21	48	12	20	35	8	227
RTOR Reduction (vph)	0	6	0	0	0	8	0	0	16	0	0	183
Lane Group Flow (vph)	Ö	864	0	0	443	13	0	60	4	Ô	43	44
Heavy Vehicles (%)	0%	1%	4%	.0%	- 1%	0%	0%	-0%	0%	4%	- 0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		<b>2</b>	i sala.	14954	6.			4			<u>8</u>	
Permitted Phases	2	- tus-		6		6	4	2 - 1 T 1 - 1981 1	4	8	ر داشم ایج بدد روم د	8
Actuated Green, G (s)		26.4	baran,	And the second	26,4	26.4	Min Sta	6.8	6.8		6.8	6.8
Effective Green, g (s)		28.4			28.4	28.4		8.8	8.8		8.8	8.8
Actuated g/C Ratio		0.63			0.63	0.63		0.19	0.19	115v	0.19	0.19
Clearance Time (s)		6.0			6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	ktolik io. lie		3.0	3.0	Sur. Suuddu birddauur	<b>3</b> ,0	3.0	اري. پهرېمد د موړي	3.0	3.0
Lane Grp Cap (vph)		1669			1103	981		274	314		260	356
v/s Ratio Prot	13		. A		4.40	w Car	in First S				1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	÷ 12
v/s Ratio Perm		c0.33			0.25	0.01		c0.04	0.00		0.03	0.02
v/c Ratio	F	0.52			0.40	0.01		0.22	0.01	4.	0.17	0.12
Uniform Delay, d1		4.6			4.2	3.1		15.3	14.7		15.1	15.0
Progression Factor	-	1.00			1.00	1,00	ar Gara	1.00	1.00	-5 A	1.00	1.00
Incremental Delay, d2		0.3			0.2	0.0		0.4	0.0		0.3	0.2
Delay (s)		4.9	•		4.4	3.2		15.7	14.7		15.4	15.2
Level of Service		Α			Α	Α		В	В		В	В
Approach Delay (s)		4.9			4.4		11.	15.5	3 <sup>1 -</sup> 3 2 -	i.j.	15.2	
Approach LOS		Α			Α			В			В	
Intersection Summary	A LY LY A PAR 189			C of A	a mark non negy action con mercing				i siis			
HCM Average Control D	elay	-	6.9	ŀ	ICM Le	vel of S	ervice		Α	<del> </del>		
HCM Volume to Capacit			0.45				4.5					
Actuated Cycle Length (			45.2	5	Sum of I	ost time	e (s)		8.0			
Intersection Capacity Ut			60.4%			el of Se			В			
Analysis Period (min)			15			÷ -						
c Critical Lane Group												

<u>, , , , , , , , , , , , , , , , , , , </u>	TW	O-WAY STOP	CONTRO	DL SI	JMMARY	<del> </del>	•	
General Information	1		Site Ir	ıform	nation	······································	· · · ·	
Analyst	MDN		Interse	ction		Entorpro	0 Dr/Dt 1	99 WB On
Agency/Co.	CME,		Jurisdi			Town of t		
		VBONbu29pm	Analys		r	2029 Buil		·
Date Performed Analysis Time Period	6/18/2009 PM Peak		_				-	_
Project Description 09		•						
East/West Street: Route			North/C	outh C	Street: Enterp	rian Oriva		
Intersection Orientation:		ашр			hrs): 0.25	rise Drive		<u> </u>
			Joiddy I	Cilou	(1113). 0.20		<del>-</del>	=
Vehicle Volumes ar	ia Aajustine					0 (1 - 1	I	
Major Street Movement	1	Northbound 2	3		4	Southbou	ina	
Movernerit	1	T	R		4	5 T		6 R
Volume (veh/h)	<del></del>	670	1		104	368		R
Peak-Hour Factor, PHF	1.00	0.90	1.00		0.66	0.66		1.00
Hourly Flow Rate, HFR (veh/h)	0	744	0		157	557		0
Percent Heavy Vehicles	0				1			
Median Type		· · · · · · · · · · · · · · · · · · ·		Undi	∕ided			·
RT Channelized			0					0
Lanes	0				0	1		0
Configuration		T			LT			
Upstream Signal		0				0		
Minor Street	Eastbound					Westbou	nd	
Movement	7	8	9	·	10	11		12
	L	Т	R	·	L	Т		R
Volume (veh/h)								
Peak-Hour Factor, PHF	1.00	1.00	1.00		1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	0	0	0		0	О		0
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		0	<u>L.</u>			0		
RT Channelized			0					0
Lanes	0	0	0		0	0		0
Configuration								* -
Delay, Queue Length, a	nd Level of Se	rvice						
Approach	Northbound	Southbound	,	Vestb.	ound		Eastbour	ıd
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	<del>,</del>	·				<del>-</del>
v (veh/h)		157						
C (m) (veh/h)		868			<del></del>			_
v/c		0.18					<del>                                     </del>	
95% queue length		0.66			<del></del>	<del> </del>		
Control Delay (s/veh)	<u>.</u>	10.1					<del> </del>	
LOS		10.1 B				<del> </del>	<del> </del> -	
	<u></u>			<u> </u>		<u> </u>	<u> </u>	
Approach Delay (s/veh)								
Approach LOS						_L_		

	<i>•</i>	<u> </u>	`\		-	•	•	<b>†</b>	<i>,</i> *	\ <u></u>	1	7
Movement	EBL:	- 	EBR	v WBl∵	WBT	MRR	· NRE	i Niet	, NBR	- QDI-:	▼ ZCDT:	SBR
Lane Configurations	ሻሻ			: "AND TOTAL	. <b>4</b> 4 10 1 10 1	SAN DISC.	يتا هِلَانِينَ ا	<u></u>	· NULL	الماليات		ODL
Ideal Flow (vphpl)		1900	1900	1900	1900	1900	1900	1900	1900	1000	<b>ብ</b> ተ 1900	1900
Lane Width	14	14	14	12	12	12	12	12	14	1300	12	12
Total Lost time (s)	4.0				'-	12	12	4.0	: -	12	4.0	12
Lane Util. Factor	0.97							0.95			0.95	•
Ert	1.00		2					1.00			1.00	
Flt Protected	0.95	•						1.00	-		1.00	
Satd. Flow (prot)	3735				÷			3574	e egytusig	144	3562	
Fit Permitted	0.95							1.00			0.75	
Satd. Flow (perm)	3735	<b>発表して、</b>			200	1.54	io kit	3574	. 44.2		2679	.15 t j
Volume (vph)	126	0	0	0	0	0	0	1361	0	44	456	0
Peak-hour factor, PHF	- 0.84	0.84	0.84	0.92	0.92	0.92	0.81		0.81	0.90		0.90
Adj. Flow (vph)	150	0	0	ő	Ô	0	Ô	1680	0	49	507	0
RTOR Reduction (vph)	- 0	<b>0</b>	0	0	0	0	0	0	0		0	÷ ō
Lane Group Flow (vph)	150	Õ	0	0	0	0	Õ	1680	0	0	556	ő
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	- 1%	2%	0%	1%	2%
Turn Type	Prot	·-··			•					Perm	<del></del>	
Protected Phases	4.4						사용합성	· 2			≟ <b>₹6</b> ≟	4 AA
Permitted Phases							•			6		. 44
Actuated Green, G (s)	7,0				34 - Wa	part & SG		43,4			43.4	
Effective Green, g (s)	9.0							45.4			45.4	
Actuated g/C Ratio	0.14	3-3-129				3 4		0.73			0.73	. 1 ^
Clearance Time (s)	6.0							6.0			6.0	
Vehicle Extension (s)	3.0		i Selections	ئىرىتى. دارىمىيىنى ئىرىمومىنى				3.0.	e Transme Pro-		3.0	y . T Harry y
Lane Grp Cap (vph)	539							2600			1949	
v/s Ratio Prot	c0.04	· .		· • • • •	¥ . 1	<del>.</del>		c0.47	27 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -			\$- -
v/s Ratio Perm	Carant est on										0.21	
v/c Ratio	0,28		* .			Înt (	Al M	0.65		·	0.29	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Uniform Delay, d1	23.8							4.4			2.9	
Progression Factor	1.00			•			2 T	1.00		a politica de la propieta	1.00	
Incremental Delay, d2	0.3							0.6			0.1	
Delay (s)	24.1	V1. 4			ediffer a			4.9		\$ 74.5	3.0	± 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Level of Service	С	i - wanda sa -			- in d		4.	Α			A	
Approach Delay (s)	jādiskā kari	24.1			0.0		*	4.9			3.0	. • 1
Approach LOS		C			А			Α			Α	
Intersection Summary			Marie (1961)	7. 22.00	Control of the contro			60 VA 2 (0.1 - 1.10)				August 175
HCM Average Control D			5.7	H	ICM Lev	el of Se	ervice		Α		·	
HCM Volume to Capaci			0.59			2.0	,'					
Actuated Cycle Length (			62.4		Sum of k				8.0			
Intersection Capacity Ut	ilization	Í .	56.9%	10	CU Leve	of Ser	vice		В			
Analysis Period (min)			15									
c Critical Lane Group					14	2						

	•	•	<b>†</b>	<b>/</b>	<b>\</b>	<b>↓</b>	_			
Movement	WBL	WBR	NBT	NBR	- SBL	SBT	 6	adulatia		
Lane Configurations	· · · · · · · · · · · · · · · · · · ·	7*	• <b>†</b> 1>	,		<b>*</b>			ASSESSED OF LOTHER	regerence en la prible especie.
Sign Control	Stop		Free			Free	•			
Grade	0%		0%	•		0%				
Volume (veh/h)	0	65	1725	18	. 0	379		•	7	
Peak Hour Factor	0.80	0.80	0.75	0.75	0.90	0.90				
Hourly flow rate (vph)	0	81	2300	24	· 0	421				
Pedestrians										
Lane Width (ft)	"" ·	1.3%	1.34			***			1 1	Zerri di
Walking Speed (ft/s)	-2.									
Percent Blockage	. 1944	,			1976				The state of the s	
Right turn flare (veh)	Aska Contract									
Median type	None	e setati	÷		3 *-					A Secretary Sec.
Median storage veh)	. Note sites		്രഹരം			-704			·	
Upstream signal (ft) pX, platoon unblocked	0.52	0.52	393		0.52	#Z1				
	2523			12. 4	2324	1		r i je i traja i j	To low a	11 L N
vC1, stage 1 conf vol	<i>؞</i> ؚ؞ؚڮڽۣۓ؞ؚ؞	:5~I ऑ <b>.O</b> , <b>≵.</b> 5			2324	3.				
vC2, stage 2 conf vol				(u, b)	i. Santa ya				esta que tenir	
vCu, unblocked vol	3002	393		iani X	2622	en nombre in die	1000	CONTRACT A SECTION		
tC, single (s)			j jija w	US, 87						
tC, 2 stage (s)	ನ್ಯಕ್ಷಿಕಾರ್ವಭಾ ಹ	** ** :T *.T *			· · · · · · · · · · · · · · · · · · ·	tisk busitis	1 14 1111	SERRETAGES OF	'ଟ୭ଟମନ'ୟ କିନ୍ନି ବିଶିକ୍ତ	
tF(s)	3:5	3.3	jihri i		2.5	k II	4 P. S		Mikist.	<b>新见得明明</b>
p0 queue free %	100	74			100	•	1,51			
cM capacity (veh/h)	6	318		1 154	51		i day		TANKE.	
Direction, Lane#	WB1	NB 1	NB 2	SB 1	- SB 2	TAILS				
Volume Total	The Party of the P	1533	791		211		Andrew St. Co.			
Volume Left	0	Ô	0	0	0	42 - 1	7.772.4.9	referentiation of property of the	ilge experience	
Volume Right	81	-0	24	. 0	-0	d Ages	. Billian			
cSH	318	1700	1700	1700	1700					
Volume to Capacity	0.26	0,90	0.47	0.12	0.12	. E \$\$1.5	th (St.)			
Queue Length 95th (ft)	25	0	0	0	Ō					•
Control Delay (s)	20,2	0.0	0.0	0.0	0.0	. P.				
Lane LOS	C									
Approach Delay (s)		0.0	en inglin	0.0	7 E E	, to failure			± 12.	
Approach LOS	С									
Intersection Summary				HOLL.						
Average Delay			0.6							
Intersection Capacity U	tilization		58.9%	I.	CU Leve	el of Se	ervice		В	
Analysis Period (min)			15						*	
							*			

	٦	<b>→</b>	•	•	4	•	•	<b>†</b>	<i>&gt;</i>	-	↓	4
Movement	EBL	_EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7*		4			<b>†</b>	<del></del>		ተተ	
Sign Control	:	Stop			Stop	٠.		Free			Free	e de la granda
Grade		0%			0%			0%			0%	•
Volume (veh/h)	14	123	413	39	0	391	0	1338	. 9	0	379	0
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.85	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	- 18	154	516	46	0	460	0	1784	12	Ö	421	Ô
Pedestrians												
Lane Width (ft)	\$ 100 p		:	-71	er i i i	HAR BE				4247		1.00
Walking Speed (ft/s)												
Percent Blockage		shafa.		- ,			el.			<u> </u>	Service y	*
Right turn flare (veh)												
Median type		None			None.		2		. Bay	i Najaran da Marajaran		
Median storage veh)												
Upstream signal (ft)			24,1		الإرب			1281			1114	- 1
pX, platoon unblocked	0.80	0.80		0.80	0.80	0.80				0.80		
vC, conflicting volume	.1773	2217	211	2594	2211	898	421		24. j. 13	1796	ista jag	
vC1, stage 1 conf vol					ing a star	and the second						
vC2, stage 2 conf vol												
vCu, unblocked vol	1716	2272	211	2744	2265	619	421	est tal		1744	11 7	
tC, single (s)	1/.5	6.5	6.9	8.5	6.5	6.9	4.1			4.1	化學 强	
tC, 2 stage (s)	. ಪ್ರತಿಕೇಶಕ್ಕೆ	a incompletare	o ô	:	lieg saar saace	o respondant	Consensario	a or too		or or suggradual		<b>3</b> 5
tF(s)	3,5	12.000	real for the second	4.5.500		3.3				2.2		생긴 뭐
p0 queue free % cM capacity (veh/h)	0	0 ີ່ຕົວລ	35	0 Č	100	0 	100			100		
	:	33	/ <sub>.</sub> 95	- 0	33	348	1134			284		
Direction Lane #	EB 1	-EB 2	WB 1	NB.1	NB 2	.SB 1	SB.2.					
Volume Total	171	516	506	1189	607	211	211					
Volume Left	18	0	46	0	0	0	0		•			
Volume Right	0	516	460	0	12	0	~ O:	Salaja e				
cSH	0	795	0	1700	1700	1700	1700				•	
Volume to Capacity	Err:	0.65	Érr	0.70	0.36	0.12	0.12	16 <sup>k</sup>			5	<b>老孩</b> 看下
Queue Length 95th (ft)		122	Err	0	0	0	0					
Control Delay (s)	Err	17.5	Err	0.0	0.0	0.0	0.0	The Park of				$I_{\mathbf{q}^{2}}^{*}$
Lane LOS	F	С	F									
Approach Delay (s) Approach LOS	Em F		Err F	0.0		0,0	\$ 1			47.4		tang ang
Intersection Summary				Q-1-		isicyk Ferbi	. Service		S-india	Jacobski (1971)		rada Sina
Average Delay			Err	94 42°4 TSTAT	PT SEA SETT		- Standard	erner in Ebri	M-,4-,50g	a, toleranis		
Intersection Capacity U	Itilization	à	80.8%	10	سمالا	el of Sen	<i>i</i> ice		<sup>1</sup> D			
Analysis Period (min)	entaction.	. "	15	. 10	. J. L.C.¥(	a or ócu	VIC G		D			•
we was			10					:				

	۶	<b>→</b>	7	€	+	•	1	<b>†</b>	<i>&gt;</i>	<b>/</b>	<b></b>	4
Movement	EBĿ.	ЕВТ	EBR	WBL	-WBT	WBR -	- NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		•		<del></del>	44	•		414		1_2: -	<b>†</b> 13	-=
Sign Control	2	Stop		2	Stop			Free			Free	
Grade		0%			0%			0%	•		0%	
Volume (veh/h)	0	0	0	13	0	.13	2	1334	Ŏ.	. 0	831	·
Peak Hour Factor	0.92	0.92	0.92	0.80	0.80	0.80	0.75	0.75	0.75	0.90	0.90	0.90
Hourly flow rate (vph)	. 0	0	0	16	0	16	3	1779	Ò	Ó	923	0
Pedestrians								,				
Lane Width (ft)						\$40 G	i de la companya della companya della companya de la companya della	100		- 1, E		
Walking Speed (ft/s)												
Percent Blockage	And And the	-				- 4	1.	, - :	1.4	1. \$ 5.	1 3114	grafia di
Right turn flare (veh)					Les North	2						
Median type		None	H 14.		None		Bridge.			1734		
Median storage veh)		other of The c						. =:	1			
Upstream signal (ft)	0.77	0.77	• ***	0.77	0.77	0.77		788	# 1 P	41 23 2		Books (1997) Frank
pX, platoon unblocked vC, conflicting volume	0.77	0.77 2707	400.	0.77	0.77	0.77	. 6 <u>7</u> 0.0			0.77		
vC1, stage 1 conf vol	1034	27.U1	462	2246	2707	- 609	923	1,511 -1 25		1779		
vC1, stage 1 conf vol		حجرية الا			marin a series y	erron Open j	.a.f., +45 - 1	egalaria ga	Magazina	-2011 Mg	(2 1	ta estala es
vCu, unblocked vol	1784	2924	462	2321	2924	550	923	1 T 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		1711		e Gerra
tC; single (s)		6.5			6.5		4.1	: tre- si	ya ili	4.1	8 15a 1 1 4	C44.35.34.
tC, 2 stage (s)		* # <b>%</b> 'A'		· M	F-16-18-18-18			াখনি হাৰ বিশ্বনি	Carrier Carrier	ast, La		
(E (s)	3.5	4.0	3.3	√ 3₹5	4:0	3.3	-2.2		การกำเล้า การกำเล้า	22		#11414
p0 queue free %	100	100	100	0	100	96	100		r ka gigina lira	100	-#J77 (F-84 )	4 P.E. (
A COMMENSAGE OF MORE LETTER BOTH AND LETTER IN	-38		547	16		371		. Nakit isa				43.3
Direction, Lane#	-WB-1		NB 2	SB.1	-SB 2			ع الآنام الآنام. <u>قالى يقيد ركاناتيانيا</u>		and the second second second second second second second second second second second second second second second Second second	Miliana sana sana sana sana sana sana sana	or og die lauk <del>die zam konsta</del>
Volume Total	32	596	The State Co. C. Transport C.	يارون 616	**************************************	estitione 480as					2 miles   10 miles   1	
Volume Left	ა∠ 16	. <u> </u>	1186 0	0 0	77.2 19.2022	depart i	şå î Presi'		() : [ 명 사실 역 . * ) 			그 선택 때
Volume Right		ა 0 ·	0	_	0 მი	ii Ii ahari	f. V		ja 1945		di a	. Acres
cSH	30	748	1700	1700	1700		가 출범 가는	i i i i i i i i i i i i i i i i i i i			ATT BEN SE	. Jak
	1.08				0.18	. Pigaggia.			e ejem engi	- #1 - 1 1 /	e oggan Ka	
Queue Length 95th (ft)	91	0	0,,,,0	0	0	4-44 pt			. M. 10	2.50	1 144 11	5.55
Control Delay (s)	382.4		0.0	0.0	0.0			. 3	134 J			a Agrico
Lane LOS	F	Ā	715		. ಕರ್ನಿಕಿಸ	. 5.00	. 3		,	100		
Approach Delay (s)	382,4	0.0		0,0	7.57	. જુનુક	٠, ٠	Ed. Ed.	10 A - 41	27	ia, art.	
Approach LOS	F	****		<i></i>				•	*		en e inglise	** .
Intersection Summary		E IVALUE CO.				CHEMINA IN			tatini.		<u>14.31</u> mi	le Bank M
Average Delay	: <u>ETERPOTE TOM</u>		4.6	**************************************				to the second of				:: <u>:::::::::::::::::::::::::::::::::::</u>
Intersection Capacity U	tilization		48.3%	Ai	CU Leve	el of Ser	vice		Α			
Analysis Period (min)			15			g. 901			. 4.5			•
, ,			. •				4.					

	۶	<b>→</b>	7	€	4	4	4	†	<i>/</i> *	<b>\</b>	ļ	<b>√</b>
Movement	∍EBL;	EBT	EBR	WBL	WBT	WBR -	NBL	-NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			•			<b>↑</b> 1>			414	
Sign Control	1	Stop		: -	Stop	Salah di		Free		Ŋ.	Free	3 F 3 H
Grade		0%			0%	•		0%			0%	
Volume (veh/h)	, <b>1</b> ,	0	0	0	. 0	0	0	1335	- 5	. 5	839	0
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.92	0.75	0.75	0.90	0.90	0.92
Hourly flow rate (vph)	2	0	. 0	0	. 0	0	0	1780	7	6	932	0
Pedestrians											21	· · · · · · · · · · · · · · · · · · ·
Lane Width (ft)	1. 45.16	,		100	8 S.		ME .	far in the fa		inst-		4年 - 建1.
Walking Speed (ft/s)												
Percent Blockage					1.20	8日 <b>特殊</b>		* *	•	1.75	ži <sup>li</sup>	1.3
Right turn flare (veh)						•						
Median type		None			None			rija ist				1.50
Median storage veh)												
Upstream signal (ft)		福马博						501	a dit .			
pX, platoon unblocked	0.76	0.76		0.76	0.76	0.76	-			0.76		
vC, conflicting volume	1833	2730	466	2261	2727	893	932	4.5		1787		34.8
vC1, stage 1 conf vol											•	
vC2, stage 2 conf vol		21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		医海绵囊					对抗感			
vCu, unblocked vol	1781	2960	466	2343	2955	545	932			1720		· -
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1		PARTY.	4.1	yf lyf	
tC, 2 stage (s)	المراج الرام المموادي	e kom e i										
tF (s)	3.5	4.0	-3.3	40000000		<b>3.3</b> 4	2	1- 14 <sup>2</sup> - 1		2.2		
p0 queue free %	95	100	100	100	100	100	100			98		
cM capacity (veh/h)	40,	- 11	549	. 14	<u> </u>	. 367	730			284	id est	
Direction, Lane #	EB1	NB1	NB:2	SB1	SB-2	TOTAL SECTION S						141216
Volume Total	2 -	1187	600	316	621		5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	- S	min the Sec	Har yes		
Volume Left	2	0	0	6	0	rom on more serv		Walter Control		48.000	. Allegair . Comment ?	2857. TSS
Volume Right	0	0	7.	- 0	0.		ra	ir engli il	الموضي	. 1815. LAN	\$ \[ \lambda \lambda \cdot \cd	i ješ
cSH	40	1700	1700	284	1700	- 1 W 42				1.21	and the latest the second	Section 2
Volume to Capacity	0.05	0.70	0.35		0.37	\$	100 78		14.5 m	أوري الأرا	. To	
Queue Length 95th (ft)	4	0	0	1	0						And we	
Control Delay (s)	100.5	0.0	0.0	0.7	-0.0	8,752,54		? <del>-</del>		. NA 1471.		
Lane LOS	F			Α	*****		,				- ;	m >. ·
Approach Delay (s)	100.5	0.0	3:00	0.2	i i i i i i i i i i i i i i i i i i i	- 1	to the end		41970	4 1 4 1	e i yerin	
Approach LOS	F	٠		• • •							<del></del> -	
Intersection Summary		11: 13 (L.F.) W		urija reija						# F \1 FID + p1	orgina to alle in E	Palaine
Average Delay	PERMITTED AND	a Lagar Lata. Ke-Veste	0.2		61 (1731-141341)			AND STREET	The state of the s			
Intersection Capacity Ut	ilization		47.1%	10	:H.I.ev	el of Ser	vicě		Λ	gr.		1.
Analysis Period (min)	<del></del>		15	-10	, LUV	o, yı gaj	i lake		.^	· •		
onou (min)			10									

	۶	>	*	*	<b>←</b>	•	•	†	<u> </u>	<b>\</b>	ļ	1
Movement	-EBL	EBT	EBR	WBL	WBT	-WBR:	∈NBL	NBT:	NBR	SBL	SBT	SBR
Lane Configurations		<del>-</del>	7		4			<b>ት</b> ጮ	<u> </u>	*	<b>†</b> ‡	<u> </u>
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	11	11
Total Lost time (s)		4.0	4.0		4:0	4,14,45		4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00			0.95		1.00	0.95	
Ed		1.00	0.85	+	0.89		e de la	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1 2,518	1752	1776		1671	医溶液管	· 50 /	3565		1685		Barrier and
Flt Permitted		0.41	1.00		0.93			1.00		0.16	1.00	
Satd. Flow (perm)	La	765	1776	: 8.4	1575			3565		287	3446	
Volume (vph)	46	0	28	52	0	270	0	1024	18	101	723	15
Peak-hour factor, PHF	0.50	0.50	0.50	0.85	0.85	-0.85	0.87	0.87			0.86	0.86
Adj. Flow (vph)	92	0	56	61	0	318	Õ	1177	21	117	841	17
RTOR Reduction (vph)	0	Ő	39	0	91	- 0	0	2	0	0-		O SE
Lane Group Flow (vph)	0	92	17	Ö	288	Ő	0	1196	Õ	117	855	0
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%		- 0%
Turn Type	Perm		Perm	Perm	-					Perm		<u> </u>
Protected Phases	1.	4					STATE	- 2			- 16	
Permitted Phases	4		4	8				a an in the	, j.	6	and Herman	m - 75 cm;
Actuated Green, G (s)	백환경설	14.6	14.6		14.6			27.6	1 7 - 1	27.6	27.6	
Effective Green, g (s)		16.6	16.6		16.6		2	29.6		29.6	29.6	11 <del>40 - 11</del>
Actuated g/C Ratio		0.31	0.31		0.31			0.55	gir a si	0.55	0.55	3 - 3 - 7 - 7 - 3 - 3 - 3 - 3 - 3 - 3 -
Clearance Time (s)		6.0	6.0		6.0			6.0	***	6.0	6.0	2.298 - 2.55
Vehicle Extension (s)	ية العالى أميرو معاد ما <u>ح</u>	3.0	3.0		3.0	Laugs		3.0	والمعاد المسا	≕.:3.0 <sub>°</sub>	3.0	San San San San San San San San San San
Lane Grp Cap (vph)		234	544		482			1947	· · · · · · · · · · · · · · · · · · ·	157	1882	
v/s Ratio Prot	1, 3.		at Mili	1. 54.5		gi raji	ar Bir	0.34		51339.1	0.25	ag a je
v/s Ratio Perm		0.12	0.01		c0.18	•				c0.41		1.1
v/c Ratio		0.39	0.03		0.60	e e laure de la composition della composition de		0.61	1.50	0.75	0.45	2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Uniform Delay, d1		14.8	13.2		16.0			8.4		9.4	7.4	***
Progression Factor	244	1.00	1.00		1.00			1.00	3. 4 <u>41.</u> 7	1.00	1,00	J-11
Incremental Delay, d2		1.1	0.0		2.0			0.6		17.4	0.2	
Delay (s)	73.5	15.9	13.2	100	18.0		m (2007)	9.0		26.8	-7.6	£30 - \$340 -
Level of Service		В	В		В			Α		С	Α	
Approach Delay (s)	1-	14.9			18.0	18141	-1.	9.0	3 - 3	in the state	9.9	
Approach LOS		В			В			Á			A	
Intersection Summary	ing Military				Lancast, affine in candidates	Town or the St.	N. P. STATES	folgs				
HCM Average Control D			10.9	F	ICM Le	vel of Se	rvice	-	В			· · · · · · · · · · · · · · · · · · ·
HCM Volume to Capacit			0.69		ing.						s 56	
Actuated Cycle Length (			54.2			ost time			8.0			
Intersection Capacity Ut	ilization	-	70.7%	·   1	CU Lev	el of Serv	/ice		C		4	
Analysis Period (min)			15									
c Critical Lane Group							*	. *	2			

	٠	<b>→</b>	<b>&gt;</b>	•	4	*	*	†	<i>&gt;</i>	<b>/</b>	<del>-</del>	-√
Movement	EBL	-EBŢ	EBR	WBL	-WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1.			र्भ	7		44+		*	<b>1</b>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.90		1.00	0,88	•
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1624				1845	1812	9 1 Fe	1935	ź - ·	1787	1616	Age Sec.
Flt Permitted	0.47	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	808	1835	dia s	7 July 1	1845		irkir lad.	1935	is this į	1787	1616	H. North
Volume (vph)	236	216	1	0	82	805	0	1	2	780	5	18
Peak-hour factor, PHF	0.54	0.54	0.54	0.93	0.93		0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	437	400	2	0	88	866	0	1	3	857	5	20
RTOR Reduction (vph)	0	· 0	0	Ò	0	0	0	`^3;	. 0	ે0	10	Ø
Lane Group Flow (vph)	437	402	0	0	88	866	0	1	0	857	15	0
Heavy Vehicles (%)	0%	0%	0%	0%	3%	1%	0%	0%	0%	· 1%≏	0%	0%
	pm+pt			pm+pt		Free	Split			Split		
Protected Phases	<b>1.17</b> .	4	in gradi	ે ક <b>ે 3</b>		·Milian	2	- : . <b></b>	of Al		1	
Permitted Phases	4			8		Free						
Actuated Green, G (s)		27 2 E F - 24	. 3.1		6.3			0.7		38.5	38.5	
Effective Green, g (s)	24.0	24.0			8.3	79.2		2.7		40.5	40.5	
Actuated g/C Ratio	0.30	~ 0.30			1 4 4 5 2 7	= 1,00		0.03	S NAM	0.51	and the second second second	graines -
Clearance Time (s)	6.0	6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)	2 <b>3.0</b>	3.0	، هُوجِية مِن هَا عَدَا أَبَ	ing in the second secon	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	365	556			193	1812		66		914	826	
v/s Ratio Prot	c0.18	0.22			0.05		ا د اگو د ا ا	0.00	(x,y) = (x,y)	c0.48	0.01	:
v/s Ratio Perm	c0.19				· · · · · · · · · · · · · · · · · · ·	c0.48						
v/c Ratio		0.72	s # Sef	, = :		0.48		0.02	5.5	0,94	0.02	er British in British in
Uniform Delay, d1	26.2	24.6			33.3	0.0		37.0		18.2	9.5	
Progression Factor	1.00	1.00	4.5	. i .	1 00	12.50		1,00		1.00	1,00	1.45
Incremental Delay, d2	112.4	4.6			1.7	0.9		0.1		16.5	0.0	
Delay (s)	138.6	29.3		27.7	35.0	0.9	1 7 T. P.	37.1	- PF-4 1	34.7	9.6	
Level of Service		C			D	A		D		C	Α	
Approach Delay (s)	·	86.2	1. 1.1.		4.1	-9 M.M.		37.1		- ::	34.0	
Approach LOS		F			А			D			С	
Intersection Summary	emi. it					Local No. Mark		g ja viti eri			Arresta Anton	HI FLORE STORE - 12
HCM Average Control D			39.7	ŀ		vel of S	ervice		D			
HCM Volume to Capaci		4.5	0.97			and the safety	*		* .		- 2	
Actuated Cycle Length (			79.2			lost time			8.0			
Intersection Capacity Ut	ulization		76.3%		CU Lev	el of Se	rvice		D		-1	
Analysis Period (min)			15									
c Critical Lane Group							**					-

	۶	<b>→</b>	*	•	<b>←</b>	•	4	†	<i>&gt;</i>	1	<b>↓</b>	4
Movement	Ţ EBL⊹	EBT	EBR	WBL	WBT-	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	-	44		. <u></u>	4ी>			43-	, · · .		447	
Sign Control	•	Free		* -	Free			Stop		s :	Stop	
Grade		0%			0%			0%			1%	
Volume (veh/h)	24	948	10	10	777.	36	6	0	.6	102	0	26
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	26	1042	11	11	835	39	7	0	7	120	0	31
Pedestrians											•	
Lane Width (ft)		1. 1. 2		-11		,	P .	*	.*	200	4.1	
Walking Speed (ft/s)												
Percent Blockage	1.11		:	, <u>\$</u>	• •	s By						•
Right turn flare (veh)				*								
Median type	11,	<del></del>			-41	· ·	$\mathbb{R}^n = \mathbb{R}^n$	None		<i>.</i> :	None	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Median storage veh)					·							
Upstream signal (ft)		e		1	984	and the second	医重换性	1 × 1 €* .	4 시 분=	;		-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
pX, platoon unblocked												
vC, conflicting volume	874	Park Car	2	1053	. , .	t. Arry	1570	1996	1047	1983	1982	437
vC1, stage 1 conf vol								•		, :-	11.4.44	100
vC2, stage 2 conf vol		1974	1922 3.3			Sept lea	- 23 - 13 - 13 - 13		at diğ.	45 86	i de la	
vCu, unblocked vol	874			1053			1570	1996	1047	1983	1982	437
tC, single (s)	4.1	g Rogel		4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)											***************************************	- 522:
(F (s)	2.2	<b>4</b> 5 :		2.2	Training 1885		-3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			90	100	97	0	100	95
cM capacity (veh/h)	780		. 18	669		Mirror :	69	- 58	228	35	59	573
Direction, Lane#	EBI	-WB∄	_WB 2	NB 1	≅SB∄.							
Volume Total	1079	428	456	14	151		n, Charles		A	S 42 T		14 7 55 .
Volume Left	26	11	0	7	120			\$+ ·	¥7	i i i vi		
Volume Right	11.	0	39	7.	31		2.5 %	4. 4.		4 1 6 .	400	
cSH	780	669	1700	106	43	1 1 1		÷			ngan di kacamatan d La kacamatan di kacamatan di kacamatan di kacamatan di kacamatan di kacamatan di kacamatan di kacamatan di kac	
Volume to Capacity	0.03	0.02	0.27		3.51		4,50		Ar in	21	en e	.1.
Queue Length 95th (ft)	3	1	0	11	Err				•			. "*
Control Delay (s)	1.1	0.5	0.0	43.9	Err					1.32		uara (f
Lane LOS	Ā	Ä	^	Е	F		-					
Approach Delay (s)	1.1	0.2			Err		V <sup>5</sup>	81.1 L	144	: " "		
Approach LOS				Ē	F		:					
Intersection Summary		7-1 TE -12-				5 755 37862 - Chr. 1, 242 565 - E. V		فلاآر المؤكل واشح	Browerski	Santara (11.25	-440 A	349-81 - TIES
Average Delay			708.3	un Trus State Busines				oral Regiser			FLIGHT SLIE	
Intersection Capacity Ut	lization		87.7%	1	شمالات	el of Ser	ruice		=			
Analysis Period (min)	m4GUUII		15	į	OU LEV	ei di OGI	AICE		E			
mayaa r Giod (IIIII)			13									

	۶	<b>→</b>	*	•	-	4	•	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	4
Movement	EBL.	EBT	EBR	WBL	WBT	WBR	= NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7	ሻ	*	7	<u> </u>	4	7	ሻ	<b>†</b>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)	1 :	4.0	4.0	4.0	4.0	4,0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt. 1997		1.00	0.85	1.00	1.00	0.85		1,00	0.85	1.00		
FIt Protected		1.00	1.00	0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)		1756	1492	1624	1693	1454	· Jak	1680	1561	1491	1776	
FIt Permitted		1.00	1.00	0.13	1.00	1.00		0.27	1.00	0.51	1.00	
Satd. Flow (perm)	7 + 8 + 2 - 3	. 1756	1492	228	1693	1454		470	1561	<b>800</b>	1776	
Volume (vph)	Ö	646	410	206	431	72	366	34	254	199	92	26
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0.89	0.89	0.92	0.92	0.92	0.50	0.50	0.50
Adj. Flow (vph)	0	808	512	231	484	81	398	37	276	398	184	52
RTOR Reduction (vph)	0	0	* 1.20 to	0	Ò	37	0	0	24		13	. 0
Lane Group Flow (vph)	0	808	390	231	484	44	0	435	252	398	223	Ó
Heavy Vehicles (%)	0%	1%	. 1%	0%	1%	0%	1%	ິ ≺0%	0%	-17%	0%	0%
Turn Type	Perm		pm+ov	pm+pt		Perm	pm+pt		pm+ov	Perm		
Protected Phases		- 6	3	5	2		1 <b>3</b>	₹ ∴8	5.		4	4
Permitted Phases	6		6	2		2	8		8	4		
Actuated Green, G (s)		-		39.0	6 AM	39.0		24.0	33.0	-111	11.1	· 计集工
Effective Green, g (s)	•	26.0	34.9	41.0	41.0	41.0		26.0	37.0	13.1	13.1	
Actuated g/C Ratio		0.35		0.55	0.55	0.55	化扩充模	0.35	0.49	0.17	0.17	g adalah
Clearance Time (s)		6.0	6.0	6.0	6.0	6.0	_	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	أيتميذ برائع	3.0		3.0	3.0	,		3.0	3.0	3.0	: 3.0	مد والمعارض
Lane Grp Cap (vph)		609	774	329	926	795		307	853	140	310	
v/s Ratio Prot		c0.46	0.06	c0.10	0.29	2 "		c0.17	0.04		0.13	
v/s Ratio Perm			0.20	0.28		0.03		0.32	0.12	c0.50		
v/c Ratio		1.33	17 (4)	0.70	0.52	200	*	1.42		2.84	0.72	23
Uniform Delay, d1		24.5	14.0	31.8	10.8	7.9		24.5	11.3	30.9	29.2	
Progression Factor	- 41	_1.00				1.00		1.00	1000	1.00	1.00	
Incremental Delay, d2	_	158.2	0.5	6.6	0.5	0.0		205.8	0.2	848.7	7.7	
Delay (s)		182.7		38.5	11.3			230.3	11.5	879.6	37.0	
Level of Service		F	В	, D	В	A		F	В	F	D	
The same of the sa		117.5			18.9			145.3	- T:		565.9	÷.
Approach LOS		۲			В			F			F	
Intersection Summary			getal.	hi 45 4 5 55;	\$.0.3a	Harry average pro-						
HCM Average Control D			182.7	}	CM Le	vel of S	ervi <b>c</b> e		F			
HCM Volume to Capacit		•	1.57			A 1 8	• . • •		•			:
Actuated Cycle Length (			75.0			ost time			16.0			
Intersection Capacity Ut	ilization		95.4%	. ]	CՄ Lêv	el of Se	rvice		· F			-
Analysis Period (min)			15									
c Critical Lane Group								: .				

	۶		•	<b>1</b>	+	4	1	†	<b>*</b>	<b>\</b>	<del>_</del>	4
Movement	EBL	ÉBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		417>			<del>-</del> -€	7		4	7*		4	7
ideal Flow (vphpl)	1900		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0	-		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95			1.00	1.00		1.00	1.00		1.00	1.00
FREE STATE OF THE		0.99			1.00			1.00	0.85		1.00	0.85
FIt Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd, Flow (prot)	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3524	 : , , , , , ,		1817	1561		1827	1615	يودو څهې	1771	1830
FIt Permitted		0.71			0.96	1.00		0.74	1.00		0.73	1.00
Satd, Flow (perm)		2514		24 - 31 - 1 - 1 - 1	1745		ita uki s		1615		1343	1830
Volume (vph)	202	855	42	13	469	18	29	7	12	28	7	211
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.60	0.60	0.60	0.89	0.89	
Adj. Flow (vph)	227	961	47	15	552	21	48	12	20	31	8	237
RTOR Reduction (vph)	0	. 4	0	ō			Ŏ				= 0	200
Lane Group Flow (vph)	0	1231	0	Ô	567	15	0	60	3	Ô	39	37
Heavy Vehicles (%)	0%		4%	0%	1%	0%	- 0%	0%	0%	4%		0%
Turn Type	Perm			Perm		Perm	Perm	<u>,</u>	Perm	Perm	<u> </u>	Perm
Protected Phases	Vii	2			6		S. Per	4		1 Gilli 324449	े ≦-8	Company of the Company
Permitted Phases	2	র র এ গ পশার ১	*** -	6	LAK PA	6	4	r das-n . Lilit	-8-9-03-N <b>4</b>	8	*** * <b>Y</b> .	8
Actuated Green, G (s)		37.1	i i i i i i i i i i i i i i i i i i i		37-1	37.1		6.6	6.6		6.6	- 66
Effective Green, g (s)		39.1			39.1	39.1		8.6	8.6	Carlotte Sand	8.6	8.6
Actuated g/C Ratio		0.70			0.70		- 3F J		0.15	ga ar ingga s	0.15	
Clearance Time (s)		6.0		****	6.0	6.0	4 * 15 * 1	6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0		Lineagrance	3.0	3.0	Talled State of the Committee of the Com	3.0	3.0		- 3:0	
Lane Grp Cap (vph)	- 14 (	1765			1225	1096		218	249		207	283
v/s Ratio Prot	i i pily h		1.5		<u>, 110</u> 3 ™ jar.				221		201	203
v/s Ratio Perm	:	c0.49	-	•	0.32	0.01	-	c0.04	0.00	1 * #* 1 * .	0.03	0.02
v/c Ratio		0,70		. <u>1</u>	0.46	0.01			0.00	gerie in Tex	0.19	
Uniform Delay, d1		4.8			3.7	2.5		20.8	20.0		20.5	20.3
Progression Factor		1:00			1.00		13 (52)	1.00	1.00		1.00	
Incremental Delay, d2		1.2	,		0.3	0.0		0.7	0.0	t talke viti	0.4	0.2
Delay (s)	11.5	6.1			3.9		1. The second	21.5	20.0	.60		20.5
Level of Service	•	Α			Α	Α		C	B	•	Č	C.
Approach Delay (s)		6.1		,	3.9		eria. Sina tablah	21.1	3 6/4	a sala	20.6	
Approach LOS		Α			Α			Ĉ		· · · · · ·	Ĉ	
Intersection Summary		TAPLET TO SEE	Company of the compan									
HCM Average Control D			7.9	F	ICM Le	vel of S	ervice		Α			
HCM Volume to Capacit	y ratio		0.62			-		1.	1000	production in		
Actuated Cycle Length (			55.7			ost time			8.0			
Intersection Capacity Uti	lization		74.9%	-[-	CU Lev	el of Se	rvice		D	٠		
Analysis Period (min)			15									
c Critical Lane Group										:		

	_	1		·								
	•	-	7	€	♣	*	1	<b>†</b>	~	-	<b>↓</b>	*
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL.	NBT	- NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7	*		7		<b>17</b> 2			<u>†</u> †	
ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	13	13	13	12	12	12	12	12	12
Total Lost time (s)	7. 1	4.0	4.0	4.0		4.0		4.0			4.0	- 4 T
Lane Util. Factor		1.00	1.00	1.00	•	1.00		0.95			0.95	
Fit some state of the state of		1.00	0.85	1.00		0.85		1.00			1,00	
Flt Protected		0.99	1.00	0.95		1.00		1.00			1.00	•
Satd. Flow (prot)	1.0	2138	1794	1243	-	1669		3570			3574	
Flt Permitted		0.99	1.00	0.61		1.00		1.00			1.00	
Satd. Flow (perm)		2138		797	- 1772s	1669		3570	8 . 1.72	wa sala	3574	Aug y
Volume (vph)	14	123	413	39	0	391	0	1338	9	0	379	0
Peak-hour factor, PHF	- •	0.80	0.80	0.85	-	0.85	0.75	0.75		0.90		0.90
Adj. Flow (vph)	18	154	516	46	0	460	00	1784	12	0.50	421	0.90
RTOR Reduction (vph)		· · · · · · · · · · · · · · · · · · ·	276	0	÷0:		0	0		0		· ~ 0
Lane Group Flow (vph)	Ô	172	240	46	. 0	451	0	1796	0	0	421	0
Heavy Vehicles (%)	2%		2%	50%	- 0%	0%		1%	2%	2%	- 1%	2%
Turn Type	Perm		1,000,000,000,000,000	custom		custom	, E 70.	<u> </u>	- Z-70		0.1- 11.X0.1	2.70
Protected Phases	- 1 Cilii					. 18	egista jir	- 2	ortical			į į a
Permitted Phases	:: Z:\\ ∕I		en i diseriale	िंदी हैं के उन्हें • • • • • • • • • • • • • • • • • • •	in the section of	Se a nain n	eft. 16	t i diçi <del>⊈</del> v	. jil jest - ili		- Ev. ∗6:	
Actuated Green, G (s)	ा १५ ५५३ १५६४	24.4	24.4	24.4	4.81 244 <i>-2</i>	24.4	National Control	43.4	8831 3			- 135 - 1
Effective Green, g (s)	· 71.70.36.77	25.4	25.4	25.4	the failure	25.4	i <del>Mina ayan</del> a A	44.4		S. Sandaline	43.4 44.4	
Actuated g/C Ratio	eleborati	0.33	0.33	0.33	C	0.33	1.70	0.57		1.44 11.38	0.57	24.7
Clearance Time (s)		5.0	5.0	5.0	74 21 1	5.0	- 13 <del>-</del> 11, 15	ر پردیات 5.0	TE: 1871			47 <sup>4</sup>
Vehicle Extension (s)	·	3.0 3.0	3.0	3.0	. j			3.0	4714 J	in a second		وخالفت بأدي
Lane Grp Cap (vph)		698	586	260	ا ساسيوم في والرابي	545	graft- <del>dage</del> ra en	2037	g makemin (1964)	<u>ಿ ಕೃಷ್ಣಿಗೆ ಬ್ರಹ್</u>		<u> </u>
v/s Ratio Prot		090	0.13	200		∞c0.27	water in	c0.50			2040 0.12	
v/s Ratio Perm	5,25	0.08	0.15	0.06			ê.	CU.QU		€ in twice	U.12	
Wc Ratio		0.25	0.41	0.00		0.83	4	0.88		<u> 52</u>	ം വര്ഷം	4,4 44
Uniform Delay, d1	11/2/17/2	19.2	20.4	18.7	`	24.2		14.4	# 15 A		0.21	
Progression Factor	istas 1	0.99	0.62	1.00	. :	1.00		1.00			8.1	
Incremental Delay, d2	Alle Alle San Alle San Alle San Alle San Alle San Alle San Alle San Alle San Alle San Alle San Alle San Alle S Alle San Alle San	0.2	0.02	0.3		10.0	· 等。1	4.9		\$1 J.E.A.	1.00	e di legi (j. 1
Delay (s)	ispisa .	19.2		19.1		34.2	4 .	19.3			0.1	
Level of Service	. 1	B	13.Z B	нэ.ц В		ر کرب <del>اد</del> وتی م	3	19.3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	= ".*.	8.2	
Approach Delay (s)	ga Mara	1.00 - 971		P	്ള വര്	· · · ·		<del>-</del> -	t	•	A	
Approach LOS		14.7 B			32.8 C	ANT HERE	19	19,3	7 - Miles	344.115	8.2	
• •		Ь			C			ь			Α	
Intersection Summary	451.44.4		offijk.		i jair			2715H			Refuniși	
HCM Average Control D			19.0		ICM Le	vel of Se	ervice		В	<u>-</u> -		
HCM Volume to Capaci	ty ratio		0.86					1	the second second			
Actuated Cycle Length			77.8	5	Sum of i	ost time	(s)		8.0			
Intersection Capacity Ut	tilization	. •	78.7%			el of Se			Ď	<u>.</u>		
Analysis Period (min)			15									
c Critical Lane Group												

Movement		٦	<b>→</b>	7	•	<b>←</b>	N.	1	†	<i>&gt;</i>	<b>\</b>	Ţ	1
Sign Control	Movement	EBL	EBT	EBR	WBL	#WBT	WBR	NBL	NBT	NBR	SBL	∃SBT:	SBR
Stop   Stop   Stop   Stop   Free   Grade   O'W	Lane Configurations												
Grade	Sign Control		Stop				şa a 🕝 🕝						
Volume (velv/h)	Grade												·" .
Peak Hourr Factor	Volume (veh/h)	0	- 0	.0	13	0	-13	2		. 0	-0		0
Hourly flow rate (vph)	Peak Hour Factor	0.92	0.92	0.92		0.80					• 71		,
Pedestrians	Hourly flow rate (vph)	0	0	0	16	0	16						
Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type Median storage veh) Upstream signal (ft) Dy, platoon unblocked VC, conflicting volume VC1, stage 1 conf vol VC2, stage 2 conf vol VC3, stage 1 conf vol VC4, unblocked vol VC3, stage 5 conf vol VC4, unblocked vol VC4, stage 1 conf vol VC5, stage 6 conf vol VC4, unblocked vol VC5, stage 8 conf vol VC4, unblocked vol VC5, stage 8 conf vol VC4, unblocked vol VC5, stage 8 conf vol VC5, stage 8 conf vol VC6, stage 8 conf vol VC7, stage 1 conf vol VC9, stage 8 conf vol VC9, stage 9 conf vol VC9, stage 9 conf vol VC9, stage 1 conf vol VC9, stage 2 conf vol VC9, stage 2 conf vol VC9, stage 1 conf vol VC9, stage 1 conf vol VC9, stage 1 conf vol VC9, stage 2 conf vol VC9, stage 1 conf vol VC9, stage										r	. –		٧. ٣
Percent Blookage   Right turn flare (yeh)   Median type   Median storage veh   Upstream signal (ft)   PX, platoon unblocked   1834   2707   462   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   889   923   1779   2246   2707   2462   2468   2707   889   923   1779   2462   2468   2707   889   923   1779   2462   2468   2707   889   923   1779   2462   2468   2707   889   923   1779   2462   2468   2707   889   923   1779   2462   2468   2707   889   923   1779   2462   2468   2707   889   923   1779   2462   2468   2707   289   2788   555   890   17712   2462   2462   2468	Lane Width (ft)	70 - 82	1 1 7 1		3	(1 ) Tas				141	41.51	14.5 P. 1	
Right turn flare (veh)   Median type   None   None   None   Median type   None   Non													
Median storage veh)         None         None           Upstream signal (ft)         50, platoon unblocked         0.78         0.78         0.97         0.78         0.77         0.97         0.77         0.77         0.97         0.78 <t< td=""><td>The second secon</td><td></td><td>18 5 (6)</td><td>. f</td><td>-13</td><td>1 2 4 1</td><td>يماد البياء</td><td></td><td>-0</td><td></td><td></td><td>48 J.S.</td><td></td></t<>	The second secon		18 5 (6)	. f	-13	1 2 4 1	يماد البياء		-0			48 J.S.	
Median storage veh   Upstream signal (ft)   PX, platoon unblocked   0.78   0.78   0.97   0.78   0.77   0.97   0.77   0.											-		
Upstream signal (ff) pX, platoon unblocked			None	1		None	Miss		4.00	to 13 -	7 - V -		200
pX, platoon unblocked													
VC. conflicting volume 1834 2707 462 2246 2707 889 923 1779 vC1, stage 1 conf vol vC2, stage 2 conf vol vC2, stage 2 conf vol vCu unblocked vol 1674 2788 414 2199 2788 555 890 1712 tC. single (s) 7.5 6.5 6.9 7.5 6.5 6.9 4.1 4.1 tc., 2 stage (s) tF (s) 3.5 4.0 3.3 3.5 4.0 3.3 2.2 2.2 p0 queue free % 100 100 100 199 100 96 100 100 cM capacity (veh/h) 47 14 570 20 14 369 747 282 2.2 p0 queue free % WB 1 NB 1 NB 2 NB 3 SB 1 SB 2 Volume Total 32 3 889 889 616 308 Volume Left 16 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Erwer -					788	1.1		493	120
VC1, stage 1 conf vol VC2 stage 2 conf vol VC2 unblocked vol 1674 2788 414 2199 2788 555 890 1712 UC, single (s) 7.5 6.5 6.9 7.5 6.5 6.9 4.1 4.1 UC, 2 stage (s) UE (s) 7.5 8.5 6.9 7.5 6.5 6.9 4.1 4.1 UC, 2 stage (s) UE (s) 3.5 4.0 3.3 3.5 4.0 3.3 2.2 2.2 p0 queue free % 100 100 100 19 100 96 100 100 cM capacity (veh/h) 47 14 570 20 14 369 747 282  Direction, Lane # WB 1 NB 1 NB 2 NB 3 SB 1 SB 2  Volume Total 32 3 889 889 616 308  Volume Right 16 0 0 0 0 0 0 Volume Right 16 0 0 0 0 0 0 USUMME Right 16 0 0 0 0 0 0 USUMME Capacity 0.86 0.00 0.52 0.52 0.36 0.18  Queue Length 95th (ft) 79 0 0 0 0 0 0  Control Delay (s) 262.3 9.8 0.0 0.0 0.0  Approach Delay (s) 262.3 0.0 0 0.0  Intersection Summary  Average Delay Intersection Capacity Utilization 53.7%  ICU Level of Service A													
VC2, stage 2 conf vol vCu, unblocked vol 1674 2788 414 2199 2788 555 890 1712 tC, single (s) 75 6.5 6.9 75 6.5 6.9 4.1 4.1 tC, 2 stage (s) tF (s) 35 4.0 3.3 3.5 4.0 3.3 2.2 2.2 p0 queue free % 100 100 100 100 19 100 96 100 100 cM capacity (veh/h) 47 14 570 20 14 369 747 282  Direction, Lane # WB 1 NB 1 NB 2 NB 3 SB 1 SB 2  Volume Total 32 3 889 889 616 308  Volume Left 16 3 0 0 0 0 0 Volume Right 16 0 0 0 0 0 0 CSH 38 747 1700 1700 1700 1700 Volume to Capacity 0.86 0.00 0.52 0.52 0.36 0.18 Queue Length 95th (ft) 79 0 0 0 0 0 0 Control Delay (s) 262.3 9.8 0.0 0.0 0.0 0.0 Lane LOS F A Approach Delay (s) 262.3 0.0 0.0 Approach LOS F Intersection Summary Average Delay Intersection Capacity Utilization 53.7% ICU Level of Service A		1834	2707	462	2246	2707	889	923			1779		W. T.
VCu, unblocked vol 1674 2788 414 2199 2788 555 890 1712 IC. single (s) 7.5 6.5 6.9 7.5 6.5 6.9 4.1 4.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1			to ober 2	e a constitue									
C. single (s)   7.5   6.5   6.9   7.5   6.5   6.9   4.1   4.1     tC, 2 stage (s)   (F (s)   3.5   4.0   3.3   3.5   4.0   3.3   2.2   2.2     p0 queue free %   100   100   100   19   100   96   100   100     cM capacity (veh/h)   47   14   570   20   14   369   747   282     Direction, Lane #   WB 1   NB 1   NB 2   NB 3   SB 1   SB 2     Volume Total   32   3   889   889   616   308     Volume Right   16   3   0   0   0   0     cSH   38   747   1700   1700   1700   1700     Volume to Capacity   0.86   0.00   0.52   0.52   0.36   0.18     Queue Length 95th (ft)   79   0   0   0   0     Control Delay (s)   262.3   9.8   0.0   0.0   0.0     Lane LOS   F   A     Approach Delay (s)   262.3   0.0   0.0     Intersection Summary   Average Delay   3.1     Intersection Capacity Utilization   53.7%   ICU Level of Service   A													
tC, 2 stage (s)  IF (s)													
tF (s)		/ / / · j	0,0	6,9	7.0	6.5	, b.9	4.1		生練問業	4.1		
p0 queue free % 100 100 100 19 100 96 100 100 100 cM capacity (veh/h) 47 14 570 20 14 369 747 282    Direction, Lane # WB 1 NB 1 NB 2 NB 3 SB 1 SB 2		:::0₹E	- M O -	ം മകക്	- A &	W. 6	್ಯಾಚಿಕ್ಕಾಗಿ ಇ		a ya maka	san was		Sant Asim San a	
CM capacity (veh/h)       47       14       570       20       14       369       747       282         Direction, Lane #       WB 1       NB 1       NB 2       NB 3       SB 1       SB 2         Volume Total       32       3       889       889       616       308         Volume Left       16       3       0       0       0       0         Volume Right       16       0       0       0       0       0         cSH       38       747       1700       1700       1700         Volume to Capacity       0       86       0.00       0.52       0.52       0.36       0.18         Queue Length 95th (ft)       79       0       0       0       0       0         Control Delay (s)       262.3       9.8       0.0       0.0       0.0         Lane LOS       F       A         Approach Delay (s)       262.3       0.0       0.0         Average Delay       3.1         Intersection Capacity Utilization       53.7%       ICU Level of Service       A	The state of the s	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			NA			of a series of the		e front	3 ,		
Direction, Lane #         WB 1         NB 2         NB 3         SB 1         SB 2           Volume Total         32         3         889         889         616         308           Volume Left         16         3         0         0         0         0           Volume Right         16         0         0         0         0         0           cSH         38         747         1700         1700         1700           Volume to Capacity         0.86         0.00         0.52         0.52         0.36         0.18           Queue Length 95th (ft)         79         0         0         0         0         0           Control Delay (s)         262.3         9.8         0.0         0.0         0.0           Lane LOS         F         A           Approach Delay (s)         262.3         0.0         0.0           Approach LOS         F         Intersection Summary           Average Delay         3.1           Intersection Capacity Utilization         53.7%         ICU Level of Service         A												e terrorea	# .
Volume Total         32         3         889         889         616         308           Volume Left         16         3         0         0         0         0           Volume Right         16         0         0         0         0         0           cSH         38         747         1700         1700         1700         1700           Volume to Capacity         0         86         0.00         0.52         0.52         0.36         0.18           Queue Length 95th (ft)         79         0         0         0         0         0         0           Control Delay (s)         262.3         9.8         0.0         0.0         0.0         0         0           Lane LOS         F         A         A         Approach LOS         F         A         A         Approach LOS         F         ICU Level of Service         A			0.0000000	. 5/.0	ΖU		- 309	<b>34</b>	IF, los s		282		
Volume Left         16         3         0         0         0         0           Volume Right         16         0         0         0         0         0           cSH         38         747         1700         1700         1700         1700           Volume to Capacity         0.86         0.00         0.52         0.52         0.36         0.18           Queue Length 95th (ft)         79         0         0         0         0         0           Control Delay (s)         262.3         9.8         0.0         0.0         0.0           Lane LOS         F         A           Approach Delay (s)         262.3         0.0         0.0           Approach LOS         F         A           Intersection Summary         3.1           Intersection Capacity Utilization         53.7%         ICU Level of Service         A				NB 2	NB 3	SB 1	-SB 2=		Piklá				120 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Volume Right         16         0         0         0         0           cSH         38         747         1700         1700         1700           Volume to Capacity         0.86         0.00         0.52         0.52         0.36         0.18           Queue Length 95th (ft)         79         0         0         0         0         0           Control Delay (s)         262.3         9.8         0.0         0.0         0.0           Lane LOS         F         A           Approach Delay (s)         262.3         0.0         0.0           Approach LOS         F           Intersection Summary         3.1           Intersection Capacity Utilization         53.7%         ICU Level of Service         A		32	`3``	889	889	616	308			rding by F.		are stories a	72 T 12 T
CSH 38 747 1700 1700 1700 1700 Volume to Capacity 0.86 0.00 0.52 0.52 0.36 0.18  Queue Length 95th (ft) 79 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			•	_	_	•	•						
Volume to Capacity         0.86         0.00         0.52         0.52         0.36         0.18           Queue Length 95th (ft)         79         0         0         0         0         0           Control Delay (s)         262.3         9.8         0.0         0.0         0.0           Lane LOS         F         A           Approach Delay (s)         262.3         0.0         0.0           Approach LOS         F           Intersection Summary         3.1           Intersection Capacity Utilization         53.7%         ICU Level of Service         A	and the contract of the contra									31 55	11 To		
Queue Length 95th (ft)       79       0       0       0       0       0         Control Delay (s)       262.3       9.8       0.0       0.0       0.0         Lane LOS       F       A         Approach Delay (s)       262.3       0.0       0.0         Approach LOS       F         Intersection Summary       3.1         Intersection Capacity Utilization       53.7%       ICU Level of Service       A													
Control Delay (s) 262.3 9.8 0.0 0.0 0.0 0.0  Lane LOS F A  Approach Delay (s) 262.3 0.0 0.0  Approach LOS F  Intersection Summary  Average Delay 3.1  Intersection Capacity Utilization 53.7% ICU Level of Service A			0.00		0.52	0.36	0.18		H. Da		- S. 182		dia -
Lane LOS F A Approach Delay (s) 262.3 0.0 0.0 Approach LOS F  Intersection Summary Average Delay 3.1 Intersection Capacity Utilization 53.7% ICU Level of Service A					_	_	0						
Approach Delay (s) 262.3 0.0 0.0 Approach LOS F  Intersection Summary Average Delay 3.1 Intersection Capacity Utilization 53.7% ICU Level of Service A		2000		0.0	0.0	0.0	0.0	1 B 1 - 45				1 1 1	the first
Approach LOS F  Intersection Summary  Average Delay 3.1 Intersection Capacity Utilization 53.7% ICU Level of Service A		•							-		_		
Intersection Summary  Average Delay Intersection Capacity Utilization  53.7%  ICU Level of Service  A						0.0	가나면 된다.	T 14 -1	t e e e	21 57			
Average Delay 3.1 Intersection Capacity Utilization 53.7% ICU Level of Service A	Approach LOS	۲											
Intersection Capacity Utilization 53.7% ICU Level of Service A	Intersection Summary	Hitarist Farm		i unate di Liu di particolo									
	Average Delay			3.1							and the state of t	the state of the s	Agent Mark State (Special)
		Jtilization		53.7%	1	CU Lev	el of Ser	vice		Α			
	Analysis Period (min)			15									

			<del>/</del>	·					····			
	•	-	7	- €	4	*	•	<b>†</b>	<b>/</b>	-	$\downarrow$	4
Movement	EBL	EBT	EBR	WBL	_WBT	- WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4						<b>ት</b> ጉ		75	<b>†</b> †	
Sign Control	:	Stop			Stop			Free			Free	2.1
Grade		0%			0%			0%			0%	
Volume (veh/h)	. 1	. 0		0	0	0	0	1335	5	5	839	: 0
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.92	0.75	0.75	0.90	0.90	0.92
Hourly flow rate (vph)	2	0	0	0		0	. 0	178Ó	7	6	932	0
Pedestrians	,											
Lane Width (ft)	134	1311			1000	12 1 32		4,		* :	4 114 2 5	1.5
Walking Speed (ft/s)									:			
Percent Blockage		g a green	1,5		v4.4	9 14 1 2	84 182	:			4 4 4	
Right turn flare (veh)					•	• .	٠	•		·		
Median type		None	1		None	Adağısı-					1.00	5 - 15
Median storage veh)		2014 12 4		,	. 1000 Per 120 Mil					7.1	11.14.1	***
Upstream signal (ft)	Jan 3-12-31.	15.70	100	100	ti sudh		- 9-32 SE	501	4.50	and the	780	
pX, platoon unblocked	0.77	0.77		0.77	0.77	0.77	•	,		0.77		and the second
vC, conflicting volume	1833	2730	466	2261	2727	893	932		5 1 -	1787	e se i e .	3,57
vC1, stage 1 conf vol					<del> </del>	ామాంధా.	: 3,7 <del>77</del>	* :	**	111,01		* # # <u>.</u>
vC2, stage 2 conf vol		ina hi	11314 -	era karanta k					a <u>14</u> (5) 11			10.58
vCu, unblocked vol	1783	2948	466	2339	2944	562	932	7.2	14. 15. 77	1723	TA ST G	
tC; single (s)	7.5	6.5	6.9			6.9		.gg/d] -y48/0		4.1		) }4.jkju *
tC, 2 stage (s)	1 1 2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	** *** · *** · · · · · · · · · · · · ·		. र प्रकार	· · · · · · · · · · · · · · · · · · ·	- n mag 5 km	s syunger.	Transfer and the	ang production of	'మాంచి' ఈ కైక్స్ క		A. 2014 T
tF (s)	3.5	4.0	3.3	3.5	4.0	÷÷:3:3	2.2	Br. Ogwi		2.2	Jan Ke	e july.
p0 queue free %	95	100	100	100	100	100	100	- 1 (1.77).	Transfer to	98	i same iet	7.5
cM capacity (veh/h)	40	111	549	· 15.	<b>11</b>	362		in the second	. JAN	286	an best to	
Direction, Lane #		NB4	NB 2	-SB/1	SB2	SB 3	i nevi		. Jani . Edga esse	in Syy:	g de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la co	
Volume Total	J. J.	1187	600	DE STATE OF THE	466		7. 2					
Volume Left	2		0.00	. 21		400	řet e		ria <del>s</del> eri .			Augusta (
Volume Right	> 0	0	-	6	0	Ü		1 2				
cSH	40	1700	7 1700	:0 286	1700	- 0 4 <b>7</b> 00			17.50	· 1 3	. Tieri	1.00%
Volume to Capacity	0.05	0.70	0.35	0.02		1700		8. 1				
Queue Length 95th (ft)	. Q.,03 4	0.70	0 (\$55	0.02 1	0.27 0	0.27						
Control Delay (s)		0.0	0.0	•	_	0	St		a e			
Lane LOS	- <del>2</del> 9.1	U.U	Ų.U	17.8	U,U	0.0		: '	1		, 1951.,	2
Approach Delay (s)	Г 00.7	0.0	ş.	0.4								
Approach LOS	99.7 F	0.0	. 3	U. I		Markin .					÷.	
Intersection Summary			(m. 17-35 1-1	i e fui	rituari		ing.				ille 2. Noville est, q	
Average Delay		Andrews Parkers	0.1		ore Claim ve	TANK THE RESERVE TO THE PARTY.		e eelieti, Californi	- 154 - 31 - 154 -			<u> </u>
Intersection Capacity U	tilization		53.7%	4	CDLA	el of Se	nvice		· A			
Analysis Period (min)	źwż-arci.		15	11,	OO LOV	C) Q  OC	14100		^			
, and your office (filliff)			. 10									

	٠	<b>→</b>	*	•	4	*	•	†	~	<b>/</b>	ļ	4
Movement	- EBL s	EBT	EBR	WBL	WBT	-WBR	. NBL	≟NBT±	NBR	SBL	SBT	ŚBR
Lane Configurations		€Î	7		4	7		<b>ተ</b> ጮ		*	<b>↑</b> ↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	15	12	12	12	12	12	12	10	11	1 <b>1</b>
Total Lost time (s)		4.0	4.0		4.0	4.0	( ) = ( ); ;	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95		1.00	0.95	
- <b>Fit</b> 和 医结合性 1000 1000 1000 1000 1000 1000 1000 10	1411	1.00	0.85		1.00	0.85		1.00		1.00	1,00	
Flt Protected		0.95	1.00		0.95	1.00		1.00		0.95	1.00	
Satd, Flow (prot)		1752	1776	4126.114	1805	1615		3565	Maria da	1685	3446	
FIt Permitted		0.72	1.00		0.70	1.00		1.00		0.15	1.00	
Satd, Flow (perm)		1323	1776		1325	1615		3565	- 10 je	ં 271 .		- 1 2
Volume (vph)	46	0	28	52	0	270	0	1024	18	101	723	15
Peak-hour factor, PHF	0.50	0.50	0.50	0.85	0.85	0.85	0.87	0.87			0.86	0.86
Adj. Flow (vph)	92	0	56	61	0	318	0	1177	21	117	841	17
RTOR Reduction (vph)	0	0	36		0	41			0		J 2	: io
Lane Group Flow (vph)	0	92	20	Ó	61	27 <b>7</b>	Ô	1197	0	117	856	0
Heavy Vehicles (%)	3%	-0%	0%	- 0%	0%	0%	. 0%		0%	* 0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm		<u> </u>	1,2,1,2,2,2,2,1	Perm	. Ashar is the Aria	
Protected Phases	alika a	- 34			78			ae - 6 - 6 -	refer ingelige	25.525		(48 % 148)
Permitted Phases	3 4	s et un <u>er</u> stet	3 4	7 8	r was Sa	78	militaria de militaria	region or the co	The Control of the Co	6	. # <del>************</del>	AT A STATE
Actuated Green, G (s)	a Tirk	31.3	31.3		31.3			50.2	ign (#igla	- 50.2·	50,2	ARTON A
Effective Green, g (s)		33.3	33.3	es to where ing	33.3	33.3	DELMI COMPLETE	52.2	* 1 (141) - 1	52.2	52.2	200
Actuated g/C Ratio	tiga (S.	0.36	0.36	- Jan 1	0.36	0.36	Tire.	0.56	idh e	0.56	0.56	
Clearance Time (s)	i de en la la la la la la la la la la la la la	-1.។ គេលាលា (***	-४१ वर्णक		- भाग्य संस्कृत	೯ ಸಾಧ್ಯಕ್ಷ	one sufficiency	6.0	् नायः ।	6.0	6.0	e di Maria
Vehicle Extension (s)	dreita.	likent.			rija ji Yora	ni disibi		ં 3,0	-1-10 J.F		3.0	
Lane Grp Cap (vph)		471	633	and a parish profits.	472	575		1990		151	1924	<u> </u>
v/s Ratio Prot	9.40 g. 1 · .	- J. (K-1)	000		- 14368 - 14368	- 10 m		0.34	4		0.25	مر <del>-</del> دي
v/s Ratio Perm		0.07	0.01		0.05	c0.17	(ਦਾਵਾ 11 ਦਾ ±2	<i>⇔</i> ∵ <b>∀</b> : <b>∀</b> : !		c0.43	0,20	
v/c Ratio	3.4.2	92.96.15.19	0.03	4.5	0.13	0.48		0.60	· 36.	0.77	0.45	es täg
Uniform Delay, d1		20.8	19.6		20.3	23.4	r ing ping i	13.7		16.1	12.1	
Progression Factor	10 [13]	1.00			1.00		المراجعة المراجعة	1.46	37 Lucia 1	1.00	1.00	
Incremental Delay, d2	* . W* 1 1	0.2	0.0		0.1	0.6	#0 S	0.4		21.6	0.2	
Delay (s)	14 - 31		19.6		20.4	24.0	58300	20.4	seget,	37.7	12.3	
Level of Service	<del>*</del>	C	В	•	C	C	, <b>5</b> 15 1	C		D	В	
Approach Delay (s)		20.5			23 1	#.4314137	e vilation	20.4			15.3	
Approach LOS		C			C	Stein British and	i ortania.	C	·		В	
Intersection Summary		Control of the				CANADA ILI	Kur I ve ve ve ve ve ve ve ve ve ve ve ve ve					
HCM Average Control D			19.0	Ī	-ICM Le	vel of S	ervice		В			
HCM Volume to Capacit	y ratio		0.66				Žaj š		4.			
Actuated Cycle Length (			93.5	;	Sum of I	ost time	e (s)		8.0			
Intersection Capacity Ut	ilization		58.9%		CU Lev				В			
Analysis Period (min)			15				•					
c Critical Lane Group						. \$	in a fe	Mag.				

	<u> </u>	<b>→</b>	7	•	+	4	•	†	<i>&gt;</i>	<b>\</b>	<del> </del>	1
Movement -	EBL.	EBT	EBR	WBL	WBT	WBR	NBL	⇒ NBT:	NBR-	SBL	SBT	SBR
Lane Configurations	*5	<u></u>			€Î	7		44+		*	<b>\$</b>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	11	11	12	12	16	16	16	16	12	11	11
Total Lost time (s)	4.0	4.0	: J		4.0	4.0	١,٠.٠	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	·	1.00		1.00	1.00	
	1.00	1.00		2.3	1.00	0.85	\$ 100	0.90	100	1.00	0.88	2 - Eg
Fit Protected	0.95	1.00			1.00	1.00		1.00	~	0.95	1.00	
Satd. Flow (prot)	1624	1835		11.1	1845	1812	1. 32	1935	极大规模	1787	1616	
Flt Permitted	0.43	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	728	1835	<u> </u>	$\mathbb{Q}^{d_{1}} \cong \mathbb{Q}^{d_{2}}$	1845	-1812		1935		1787	1616	il Distriction
Volume (vph)	236	216	1	0	82	805	0	1	2	780	5	18
Peak-hour factor, PHF	0,54	0.54	0.54	0.93	0.93	0.93	0.75	0.75	0.75	0.91	.0.91	0.91
Adj. Flow (vph)	437	400	2	0	88	866	Ō	1	3	857	5	20
RTOR Reduction (vph)	7.7	0	. 0	. ₹# <b>.0</b> :	0	0	- : = 0	3	0	Ō	- 10	O
Lane Group Flow (vph)		402	0	0	88	866	Ó	1	Ô	857	15	Ō
Heavy Vehicles (%)	0%	0%	. 0%	_0%	3%	1%	0%	0%.	0%	1%	0%	0%
Turn Type	pm+pt			pm+pt		Free	Split			Split		
Protected Phases	1. The Tri	4:5:4	+ 3484 July	. § <b>3</b> -	8		- 2	2	存在场景	<b>1</b>	## 1 1 E	
Permitted Phases	4			8		Free					.,	
Actuated Green, G (s)	31.3	22.9			5.3	93.5		. 0:4.		43.8	43.8	r defi
Effective Green, g (s)	33.3	24.9			7.3	93.5		2.4		45.8	45.8	-
Actuated g/C Ratio	0,36	0.27			and the property of the contract of	1,00	ARIT.	.0.03	计模点。	0.49	0.49	
Clearance Time (s)	6.0	6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		:::3.0	ي چانانيون		3.0	7 7	<u> </u>	3.0		3.0	3.0	ê <b>A</b> ria
Lane Grp Cap (vph)	470	489			144	1812		50		875	792	
v/s Ratio Prot	c0.22	0.22			0.05		3	0.00	<u>}</u>	c0.48	0,01	
v/s Ratio Perm	c0.11	and the second				c0.48					_	
v/c Ratio	0.93	0.82			0,61	0.48		0.02	Steel A	0.98	0.02	-15 2-
Uniform Delay, d1	26.7	32.2			41.7	0.0		44.4		23.4	12.3	
Progression Factor	1.00	1.00			1,00	1,00		1,00	2014		0.13	(territoria
Incremental Delay, d2	24.8	10.7	_		7.5	0.9		0.2		24.0	0.0	
Delay (s)	<i>5</i> 1.5	42.9	ें सर्थ		49.2	0.9	in the second	44.6		36.2	1.6	
Level of Service	D	D			D	Α		D		D	Α	
Approach Delay (s)	1 9,758	47.4		e e	5.4		불면하다	44.6	10.02 (1.03)		35.2	# 17 W
Approach LOS		ט			Α			D			D	
Intersection Summary		L. hi ravar v L. da. vanen				rachi der selle Care selle						
HCM Average Control			28.4	ŀ		vel of Se		_	C			
HCM Volume to Capac		y i e	0.91	4.						8.1	5 g	
Actuated Cycle Length			93.5			ost time			8.0			
Intersection Capacity U	Itilization		76.3%	. ]	CU Lev	el of Ser	vice		. D	•	,	
Analysis Period (min)			15									
c Critical Lane Group	) in the				9 2					. ;		

	<b>≯</b>	>	*	•	<b>←</b>	A.	1	<b>†</b>	<i>*</i>	<b>\</b>	<b>↓</b>	1
Movement -to #	EBL	⊈EBŢ:	EBR	WBL	WBT	-WBR	NBL	NBT	-NBR	SBI -	SBT	SBR
Lane Configurations		4			474		<u> </u>	4			<u></u>	<u>ODI.(</u>
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	12	12	11	11	12	12	12	12	12	12
Grade (%)	. •	0%		1 2	0%	115	1. A	- 0%	N A		1%	· <del>-</del>
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor	$\gamma_{p^{2}}(s)=ct$	1.00	1		0.95	14 . A.	· - 5 - 50	1.00		ar İgalər	1.00	
Frt		1.00			0.99			0.93			0.97	
Fit Protected	4. A	1.00	,	•	1.00	91	maji ş	0.98		推行 67.	0.96	1.00
Satd. Flow (prot)		1940			3432			1729			1765	
Fit Permitted		0.97	3	1217	0.94		To a little	0.89		\$ 140 °	0.77	NJ OF
Satd. Flow (perm)	. I van Awtuur No	1885	· x		3234			1573			1403	
Volume (vph)	24	948	10	10		36	6.	_ 0	ે. ૄે6	102		30
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	26	1042	11	111	835	39	7	0.	7	120		35
RTOR Reduction (vph)	0	1 . 4656	0	0	4	0	0	6	0	0	16	0
Lane Group Flow (vph)		1078	0	\$1.5	881		The state of the s	8	- 1 dec/ per 2	0	139	- <u> </u>
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type Protected Phases	Perm		of the C	Perm			Perm			Perm		
Permitted Phases	-SAIR <b>A</b> L	<b>2</b> Faraidh	. 75₹	⊲as <b>a≽</b> 4	<b>6</b>	: Minitadel	i e ustane e engle.	4	e in the state of	v va nila	8	
Actuated Green, G (s)	urra 4.2	47.6	195 <u>.</u>	6	- K-3.247		4.	74. W		÷.8		
Effective Green, g (s)		48.6	1,891 h . a c		47.6 48.6	هري ک	Strands.	10.1	TOTAL SERVICE	E11 1 4 4 7	10.1	
Actuated g/C Ratio	P St. Lif	0.72			0.72			11.1			11.1	
Clearance Time (s)		5.0	- Fg.w.	1 11 113	5.0	ili Awa	eri sueser	0.16 5.0	en gatory.	الأراث والمنتواجر أ	0.16	
Vehicle Extension (s)	i kikuluru sif	3.0	وحتن أهاڤ بات	the second second	3.0		· Application	3.0	रेक देवत्रकी		5.0	나는 용시 [1]
Lane Grp Cap (vph)	138874.35	1353	क्ता क्षेत्रका । स्टब्स्का	TVT-faires	2322		1. 12.3.3.1.3.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	258		£-\$0.00	3.0	
v/s Ratio Prot	f.ef	~:1 DOG	1000		ZUZZ	<del>.</del>	Profit Name	<i>2</i> 30			230	
v/s Ratio Perm	15 gg	c0.57		135	0.27	Najagaran i	ia de .	0,01	i garan najaga	(취소 항공 1.	c0.10	
v/c Ratio		0.80	7.67		0.38	7. 2.		0.03	o Disconsignation	당~ 육1	0.60	Profit
Uniform Delay, d1		6.3	i gydd	and the second of the	3.7		geliga (Pad	23.8		(1981) (1981) S.	26.3	
Progression Factor		1.00		7	1.00		Se. 4 - 1 - 1 - 1	1.00		TETE A	1.00	r Er r
Incremental Delay, d2	, r	3.4	1 2107	1. 1. H	0.1			0.1		opiau e	4.4	
Delay (s)		9.7	•		3.8			23.8	" <i>*</i> ,		30.7	
Level of Service	to diagonal	A.	N. Die	4 H J	1.0	egik kir		No. 1 (144)	\$ 1.50	- Ser	· ČC	
Approach Delay (s)		9.7			3.8			23.8	24-	•	30.7	# 1 · · ·
Approach LOS		Α	i storije	14 F y	Α	erake .		C		4. K	C	
Intersection Summary		ing projection.	<u>ill</u> j	e lisi					- 173 C-44 - 273 - 5-44			
HCM Average Control D		· · · · · · · · · · · · · · · · · · ·	8.9	H	ICM Lev	el of Se	ervice		Α	न्द्र अक्षा कुर दिस् इं	77 - 6	71 . A.
HCM Volume to Capacit			0.76									
Actuated Cycle Length (			67.7		um of l				8.0	•	-	
Intersection Capacity Uti	lization		87.9%	10	CU Leve	el of Ser	vice		Е			
Analysis Period (min)			15						•	* * *		
c Critical Lane Group												

	<i>&gt;</i>	<b>→</b>	•	•	<b>←</b>	*	*	†	<i>&gt;</i>	<b>&gt;</b>	<b>↓</b>	4
Movement	EBL	EBT.	EBR	WBL	WBT	WBR	NBL	NBT	NBR-	∵SBL÷	_SBT	SBR
Lane Configurations		<b>ተ</b> ተ	7	ኻ	<b>*</b>	*	ች	1,		*	7>	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	9	9	12	10	12	11	12	12	12
Total Lost time (s)	· :=.	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	**	0.95	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	•
Frt 300 Table		1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	To be to the
Satd. Flow (prot)		3336	1492	1624	1225	1583	1668	1645	, .	1770	1802	ng sa u
Flt Permitted	5.77	1.00	1.00	0.16	1.00	1.00	0.40	1.00		And the second second		100
Satd. Flow (perm)	Xer in a	3336	1492	270		1583			÷	0.67	1.00	11 × 151
	<u> </u>						- 3 <b>7</b> 02	1645	. (1.25 ) is		1802	
Volume (vph)	0	646	410	206	431	72	366	34	254	199	92	26
Peak-hour factor, PHF	0.92	0.80	0.80	0.89	0.89	Sec.	0.92	0.92	0.92	0.92	The second of the second	0.92
Adj. Flow (vph)	0	808	512	231	484	78	398	37	276	216	100	28
RTOR Reduction (vph)	0	0	11.00 Mark		0	The Contract of	4 100		0		15	0
Lane Group Flow (vph)	0	808	156	231	484	38	398	79	0	216	113	0
Heavy Vehicles (%)	2%	1%	1%	0%	1%	2%	1%	2%	0%	2%	2%	2%
Turn Type			Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	li hŵ		Popular III	5.	2		_∴⊴-8-	ું કર્ું ડ્રં <b>3</b> ⊤		4	1. <b>1</b>	3 4 KE V
Permitted Phases			6	2	•	2	3			7	,	***********
Actuated Green, G (s)		-19.3	19.3	31.8	31.8	31.8	24.8	8.6	y y y	15.6	4.0	
Effective Green, g (s)		21.3	21.3	33.8	33.8	33.8	28.2	10.6		19.6	6.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Actuated g/C Ratio	1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	0.30	0.30	0.48	0.48	0.48	0.40	0.15	A laigh	0.28	0.09	
Clearance Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	1984 1988
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)	<u> </u>	1015	454	295	817	764	534	249	Feb. 62500	450	154	- Carellande de
v/s Ratio Prot	4 (F. 1942)	0.24		c0.10	0.29		c0.19	0.05		0.09	0.06	sign for a
v/s Ratio Perm	. F	e 3 <b>300 - €</b> - 1.5	0.10	c0.28		0.02	c0.11	9.90		0.04	U.UU	
v/c Ratio		0.80	0.34	0.78	0.59		0.75	0.32			<b>∂</b> 0.74	- Service 2
Uniform Delay, d1	* * * * * * * * * * * * * * * * * * *	22.4	18.9	13.4	13.1	9.6	16.6	26.5	1.47	20.8	31.2	.15
Progression Factor		1.00	1.00	1.72	1.21	2.13	1.00	1.00		1.00		
Incremental Delay, d2		6.5	2.1	12.3	3.0	0.1	5.6	0.7		0.8	199	
Delay (s)		28.8	21.0	35.4	18.9		22.2	27.2			16.6 47.9	
Level of Service		- 20.0 C	- 2 I.U	55.4 D	В	20.5		21.2			47.9 D	(B) (-)
and the state of t	_ ^ :			U	_	_	<b></b>	. ha∵a		C	ال ا	
Approach LOS	11 1 1	25.8 C	s		23.9 C	36 i ` ` ` `	and Alley	24.4		*	31.4	
			=								C	
Intersection Summary										The state of Tables 19.		
HCM Average Control D			25.6	F	ICM Le	vel of S	ervice		С			
HCM Volume to Capacil			0.74						133	· · · · · ·		
Actuated Cycle Length (			70.0			ost time			8.0			
Intersection Capacity Ut	ilization		71.1%	4).	CU Lev	el of Se	rvice		С		Ē	
Analysis Period (min)			15									
c Critical Lane Group												

	۶	<b>→</b>	7	•	<b>4</b> ~~	A.	4	†	<i>&gt;</i>	<b>\</b>	<del> </del>	4
<u>Mo</u> vement	- EBL	EBT:	EBR	WBĿ	-WBT	≅WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	•	414			4T+			4	7		4	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0		2.5	4.0			4.0	4.0	,	4.0	4.0
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	1.00
o <b>Fit</b> gogod <sup>™</sup> of the control of		0.99	* 1		0.99			1.00	0.85	4	1,00	≈ 0.85
Fit Protected		0.99			1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)	: No. 12	3524	ð í		3434	4 F.		1827	1615	1 14 1	1771	1830
Flt Permitted		0.68			0.91			0.74	1.00		0.73	1.00
Satd. Flow (perm)	I Kin	2416	ing kara-	45	- 3143	jaran .	·	1410	1615	water of	1343	1830
Volume (vph)	202	855	42	13	469	18	29	7	12	28	7	211
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	- 0.85	0.85	0.60	0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	227	961	47	15	552	21	48	12	20	31	8	237
RTOR Reduction (vph)	0	and the second	0	Ō	3	0	Q	. 0	18	··· 0 -	Ō	177
Lane Group Flow (vph)	0	1233	0	0	585	0	Ó	60	2	0	39	60
Heavy Vehicles (%)	0%	1%	4%	0%	1%	- 0%	0%	0%	0%	4%	0%	₹ 0%
	pm+pt			Perm			Perm		Perm	Perm		pm+ov
Protected Phases	- 5	∿÷ ⊹ 2			: €6		a Hyte	4	13350	4 93 a	8	्
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	No de	52.4			40,8			5.6	5.6		5.6	11.2
Effective Green, g (s)		54.4			42.8			7.6	7.6		7.6	15.2
Actuated g/C Ratio		0.78	Arrigija Arrigija		0.61			0.11	0.11		0.11	0.22
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	tiet in de Stapens		3.0		e norma je	3.0	3.0	ज्ञासकेत्रीय	3.0	3.0
Lane Grp Cap (vph)		1998			1922			153	175		146	502
v/s Ratio Prot		c0.07	t vila 1 to					•	tid og åt. Og gjanger i til		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.01
v/s Ratio Perm		c0.41			0.19			c0.04	0.00		0.03	0.02
v/c Ratio		0,62			0.30	123 1 1 1			0.01	4	0.27	0.12
Uniform Delay, d1		3.3			6.5			29.0	27.9		28.6	22.0
Progression Factor	W.	1.14		}-:	1.00				1.00	1.11	1.00	1.00
Incremental Delay, d2		0.4			0.4			1.7	0.0		1.0	0.1
Delay (s)	an i	4.2		47.15	6.9	à i		30.7	27.9		29.6	22.1
Level of Service		A			A			C	C		С	С
Approach Delay (s)		4.2			6.9	, has		30.0	÷ ***	* :	23.2	4.53
Approach LOS		Α			Α			С			С	
Intersection Summary		50.000 T. 2			The little			feritiet	£2135.7745	Winds		
HCM Average Control D			8.3	ŀ	ICM Le	vel of Se	ervice		Α			
HCM Volume to Capacit		•	0.58			-		• •				
Actuated Cycle Length (			70.0		Sum of lo				8.0			
Intersection Capacity Uf	ilization	-	63.4%	j.	CU Leve	el of Sei	vice		В			-
Analysis Period (min)			15									
c Critical Lane Group		**								•		

## **Appendix G – Peak Hour Traffic Signal Warrants**

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

Figure 4C-4
Reduced Peak Hour Volume Warrant

Source: Federal MUTCD

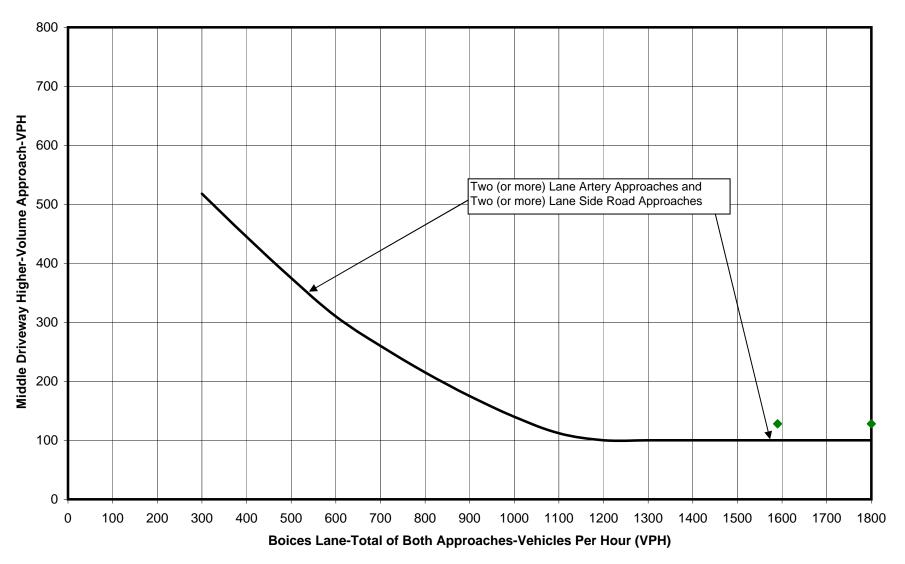
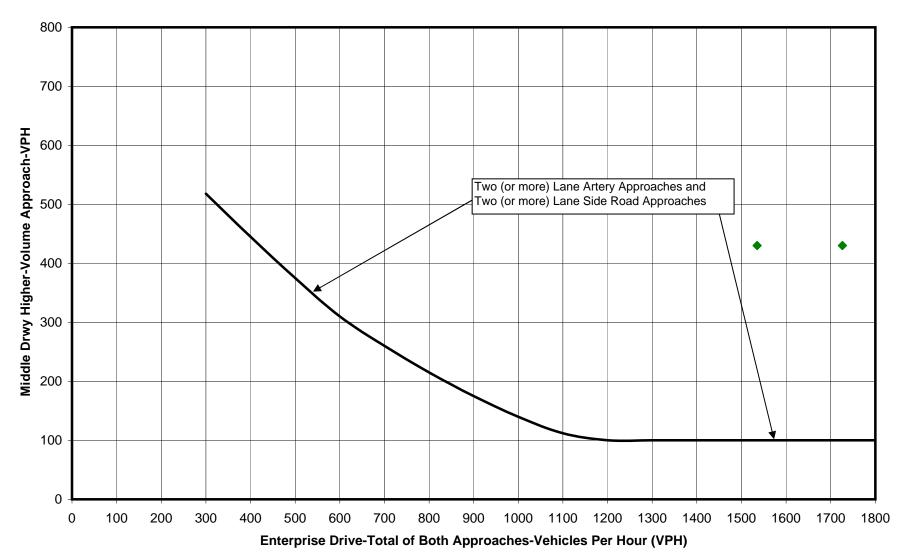


Figure 4C-4
Reduced Peak Hour Volume Warrant

Source: Federal MUTCD



# Appendix H – Threshold Level of Service Analysis

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

	<u> </u>	_			-	•	•	<b>†</b>	<i>&gt;</i>	\ <u>\</u>	1	7
Movement	EBL	EBT	EBR	• WBL	WRT	. WBR	v NBE	, NBT	NBR	SBL	▼ SBT	- SBR
Lane Configurations	gr finge: Down	*	7.	lif.	<b>A</b>	**************************************	- 10 10	લ	7	ħ	<u></u>	
Ideal Flow (vphpl)	1900	1 900	1900	1900	1900		1900	1900		1900	1900	1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)	4 14 FLM	4.0	4.0	4.0	4.0	- 4.0		4.0	4.0	4.0		
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	anders statut
Frt. 1997		1.00	0.85	1.00	1.00			1.00	0.85	=1.00		
Flt Protected	V-1 (V-21) (V-21)	1.00	1.00	0.95	1.00	1.00		0.95	1.00	0.95	1.00	4.45.40.50.84.5
Satd. Flow (prot)		1756	1492	1624	1693			1675	1561	1728		49754
Fit Permitted		1.00	1.00	0.13	1.00	1.00	iti ziKwiWi :	0.50	1.00	0.55	1.00	
Satd. Flow (perm)		1756	1492					873	<b>≧</b> 1561∃		1777	
Volume (vph)	0	465	335	177	343	18	308	9	219	50	19	3
Peak-hour factor, PHF	.0.80	0.80	0.80			0.89	0.92			0.85	0.85	-
Adj. Flow (vph)	0	581	419	199	385	20	335	10	238	59	22	4
RTOR Reduction (vph)	0	Ø	197	<b>0</b>	0	9	0	O	59	0	4	. 0
Lane Group Flow (vph)	0	581	222	199	385	11	0	345	179	59	22	0
Heavy Vehicles (%)	0%	1%	1%	0%	1%	0%	1%	0%	0%	1%	1%	1%
Turn Type			pm+ov	pm+pt		Perm	pm+pt		pm+ov	Perm		
Protected Phases	TOTAL CONTROL OF THE	6	ું કે ⊲ે 3	5	7 7 7 2 2		34548	8	5		4	and of a second second
Permitted Phases			6	2		2	8		8	4		
Actuated Green, G (s)		24.0	36.4	≥ 38.8	38.8	38.8		25.6	34.4	7.2	7.2	
Effective Green, g (s)		26.0	40.4	40.8	40.8	40.8		27.6	38.4	9.2	9.2	
Actuated g/C Ratio		0.34	1. 1 . W N	0.53	0.53	the contract of the contract o		0.36			0.12	
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0		
Lane Grp Cap (vph)		598	867	319	904			467	866	121	214	
v/s Ratio Prot		c0.33			₫ 0.23			c0.14			0.01	
v/s Ratio Perm			0.10	0.24	27 87 100 100	0.01		c0.13	0.09	0.06		
v/c Ratio	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0.97	0.26	7 www.	0.43	::::::::::::::::::::::::::::::::::::::	10 March 10	0.74		W. A	13.11 11.13 AMP ( 1904 )	
Uniform Delay, d1	n new mind an dar	24.8	9.8	14.0	10.7	8.4		21.3	10.5	31.4	29.9	
Progression Factor:		1.00	THE PARTY OF THE PARTY OF THE PARTY OF			- 1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	istorio de Santo	29.6	0.2		0.3		. 10 0000   200.0000 10	6.0	0.1	3.1	0.2	rana and
Delay (s)		54.4	10.0	· ~ ******	111		Service Control of th	27.3	· a man and gen, go a man	34.5	· · · · · · · · · · · · · · · · · · ·	
Level of Service	** W. W. S. S. S. S. S. S. S. S. S. S. S. S. S.	D	A List Sta	В	B Ann			C	<b>B</b>	С	C	
Approach Delay (s)	4000000	35.8			13.2			20.5		i fi.	- 533.1	ikté
Approach LOS		D			В			C			U	
Intersection Summary		101 - W/1										
HCM Average Control D		radulta or	25.8		HCM Le	evel of S	Service	e teers (6.5.5)	С	a sua li esticular	and the second of the	
HCM Volume to Capaci			0.81									Service Control of th
Actuated Cycle Length		andri or to a	76.4			lost time		نايت منيايج	12.0	5 4 25 1	والمناف المساحة المواد	الادار مستبع ارامي
Intersection Capacity U	tilization	tinjë.	68.5%		l€U Lev	el of Se	ervice		· AE C	.s. galjagi	retien.	7 370 4
Analysis Period (min)	A gw <sup>ar</sup> gwir disc	ئى سىدائىنى	15	r. January	Transports and	51,32 J. B. W.	i wilet teli	g deer over	garage and a	5 1 s .e.	SAESH GUSE T	grej ratikakit
c Critical Lane Group				######								Table i

	۶	<b>-</b>	*	€	4	•	*	†	<b>/</b>	<b>\</b>	<b></b>	1
Movement	ÉBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		414			4	*		4	7		स	7
ideal Flow (vphpl)	1900		1900	1900	1900	1900	1900		1900	1900		1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)	to fiet	4.0		<b>35, 14</b> E	4.0	-:∴4.0∻		4.0	4.0	, PALIE	4.0	4.0
Lane Util. Factor		0.95			1.00	1.00		1.00	1.00	•	1.00	1.00
		0.99			1,00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	With the second control of the control of the	3512			1816	1561			1615		1771	1830
Flt Permitted		0.77			0.97	1.00		0.74	1.00		0.75	1.00
Satd. Flow (perm)		2751			1761	1561	141		1615		1382	1830
Volume (vph)	160	538	36	12	337	16	25	6	11	24	6	176
Peak-hour factor, PHF	the rivery property and the same	0.89	0.89	0.85	0.85	mile control of the c	0,60	0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	180	604	40	14	396	19	42	10	18	27	7	198
RTOR Reduction (vph)	0.	6	0		0		0	0	14	The second	1 # 0	159
Lane Group Flow (vph)	0	818	0	0	410	12	0	52	4	0	34	39
Heavy Vehicles (%)	0%	1%	4%	0%	1%	0%	0%	0%		4%	0%	0%
Turn Type	Perm	r. root dalo		Perm	( p. 100 100 100 100 100 100 100 100 100 10	Perm	Perm	energy and a feet	Perm	Perm		Perm
Protected Phases	lälli	2	The second secon		6						8	
Permitted Phases	2	- 55 E	The William Co.	6		6	4		4	8	an an l <u>as</u> naria	8
Actuated Green, G (s)		26.5		7 32	26.5	26.5		7.0	7.0	HHAL	1 7.0	7.0
Effective Green, g (s)	UK BID 1886F AB	28.5	Ferrocciano di Jacia	5 a 300 a 4 000	28.5	28.5	. 101. <b>2011 (20</b> 11)	9.0	9.0	::::::::::::::::::::::::::::::::::::::	9.0	9.0
Actuated g/C Ratio	e trelat	0.63			0.63	4-1		0.20	0.20		0.20	0.20
Clearance Time (s)	esseteles e	6.0 3.0	0.000 W. C. C. C. C. C. C. C. C. C. C. C. C. C.	Print Service 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6.0 3.0	6.0 3.0	61.040 - 27.7 <b>3.7 S</b>	6.0 3.0	6.0 3.0	182.778 (14.17)	6.0 3.0	6.0 3.0
Vehicle Extension (s)		CO. D 27111124111 2								RIALIV:	************	
Lane Grp Cap (vph)	hrkiria	1723	ara <b>a</b> ti a sat	-2 - 53991	1103	978		279	319	1 I & 1887 14	273	362
V/s Ratio Prot		-A 2A			0.00	0.04		~^ ^4	0.00		000	
v/s Ratio Perm	) Length	0.30 0.47		abenda di	0.23 0.37	0.01 0.01	e wat na	c0.04	0.00 0.01	2757.a.i	0.02	0.02
v/c Ratio Uniform Delay, d1		4.5	March Control of the			3.2		15.2	14.7		15.0	15.0
Progression Factor	1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m	1.00			1.00	1.00		1.00	1.00	e a is é sistem	15.0 1.00	1.00
Incremental Delay, d2		0.2		. V	0.2	0.0		0.3	0.0		0.2	0.1
Delay (s)	eeele aa	4.7		reje Dia	4.4	3.2		15.5	14.7	Widt 13		15.1
Level of Service	9.77.34.34.34.34.44.44.44.44.44.44.44.44.44.	 А			TEFATA A	A		В	В на:	(왕, H왕)는 영남.	В	В
Approach Delay (s)			23 - 23 - 23 - 23 - 23 - 23 - 23 - 23 -		4.3	The second						The second second in
Approach LOS		Α			Α		3.02	В		145. WET OF A 1	В	er if telf
Intersection Summary									90 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			G
HCM Average Control D			6.6	H	ICM Le	vel of Se	ervice		Α			
HCM Volume to Capacil			0.41							<b>1</b> 47741		
Actuated Cycle Length (			45.5			ost time			8.0		_	
Intersection Capacity Ut	ilization		57.4% ·		CU Lev	el of Ser	vice		- В-			
Analysis Period (min) c Critical Lane Group	erik rom Westun	%7 Sept.	15		j., .v10.	o (SEA/ACTIVA				ىلۇرىدىنى بىرى ئالارىدىن	a a roqia	JALETY)
e ∽ittiedt Fatte:@iΩtib:	uje je Tigravi i i i i			MARKENS.	Numer 125	. Italy						nd stigation

	<i>→</i> _	• `	•	<b>←</b>	*	1	<b>†</b>	<b>/</b>	/	. ↓	4
Movement	TEBL E	T EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	* SBT	SBR
Lane Configurations	(r 3/2 4 - 2/20 Million 100 Mi	* *	*	<b>*</b>	7	0.4	<b>4</b>	7	ካ	<b>4</b>	
Ideal Flow (vphpl)	1900-190	I I			1900	1900	1900			1900	1900
Lane Width	water a first principle with the party to the	0 10	eran eta era era eta eta eta eta eta eta eta eta eta et	9	9	10	10	11	11	11	11
Total Lost time (s)		0 4.0		4,0		azai.	4.0	4.0	÷ 4.0	4.0	
Lane Util. Factor	1.0		* * * * * * * * * * * * * * * * * * * *	1.00	1.00	Salara Aria in i	1.00	1.00	1.00	1.00	-1,47 (2014) (a. 1. 1.
	44.44.41			1.00	0.85		1.00	0.85	1.00		
Flt Protected	1.0	20 10 7 20 20 11 12 12 12 12 12 12 12 12 12 12 12 12	The Late Value of Manager	1.00	1.00	2000 CONTRACTOR OF THE PARTY OF	0.95	1.00	0.95	1.00	#04maseu
Satd, Flow (prot)	176						1677	1561	1728	1760	
Flt Permitted	1.0	the real property of the second		1.00	1.00	er film era vlatteræ	0.54	1.00	0.55	1.00	
Satd: Flow (perm)	44 11 a d 176					AFERE	940	1561	996	1760	ee a
Volume (vph)	0 50	***		355	36	312	17	219	99	47	13
Peak-hour factor, PHF	0.80 0.8				0.89		0.92			0.85	
Adj. Flow (vph)	0 63			399	40	339	18	238	116	55	15
RTOR Reduction (vph)		0 234					. 0			12	. 0
Lane Group Flow (vph)	0 63	was a service of the care		399	22	0	357	188	116	58	0
Heavy Vehicles (%)	0% 1 1					-		0%	1%		1%
Turn Type	<u>rom y Maraga</u>		pm+pt			pm+pt		pm+ov	Perm	# # # MA	<u> </u>
Protected Phases		6 de ale3	p	<b></b>	I GIIII	3	8				EB-S-Si
Permitted Phases		6	2		2	Ω Ω		Ω	1	## ## # # # # # # # # # # # # # # # #	
Actuated Green, G (s)	24	.0 29.7	, 38.8	38.8	38.8		23.9	32.7	12.2	12,2	
Effective Green, g (s)	26	day of a second or an analysis of the second		40.8	40.8		25.9	36.7	14.2	14.2	in the second
Actuated g/C Ratio							0.35	0.49		0.19	91-91-E-1
Clearance Time (s)		.0 6.0	- Control of the Cont				6.0	6.0	6.0	6.0	######################################
Vehicle Extension (s)		.0 3.0				distant.	3.0	3.0	3.0		
Lane Grp Cap (vph)	6′					1,	402	851	189	335	<u> 2000 EDRAFIE</u>
v/s Ratio Prot	.03 il 14 1 100.4		, 020 3 ∉c0.09				c0.09	0.03		0.03	7 3 3337
v/s Ratio Perm	andicipi 27:	0.10	THE APPROXIMATE OF THE PARTY OF		0.02		c0.22	0.09	0.12	0.99	* # 3
v/c Ratio		0.10			0.02		0.89			0.17	
Uniform Delay, d1	24	A CONTRACTOR OF THE PARTY OF TH	A		7.8		23.0	10.8	27.7	25.3	
Progression Factor						i ef shari	1.00		1.00	1.00	M 47 20 20 3
Incremental Delay, d2	44	material control of the Section		PRINCE OF CONTRACT		- 2.27 C . 334C33.	20.4	0.1	5.8	0.2	Water Wilder
Delay (s)	69						43.5			25.6	
Level of Service	/1948.F	E E				.524 1.54.5 <u>8</u>	D	В	С	С	<del>Maria</del> Janua
Approach Delay (s)	46	agranting on the second		12.4			30.5			30.5	
Approach LOS		D		В		20 2 2 2 2 2 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5	С	ali Tian i suffact (Sa).		С	B 900 (80, 6 10)
Intersection Summary			17 to 2001		201706 A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 2 8 6 68 1 6 48		1	6. 61 of	
HCM Average Control I	Delay	32.6	)	HCM Le	evel of S	Service	- A	С			
HCM Volume to Capac		7 0.89				ry e y s	a svijy	Mar.			
Actuated Cycle Length		74.7		Sum of	lost time	e (s)		12.0	::	and the state of	- 41 m-
Intersection Capacity U	A	71.2%		ICU Lev					iķ,ŧč,	arun d	-1.71
Analysis Period (min)	er segueramen sitti	15		· ""							
c Éritical Lane Group											#ENNE
The second secon											

	<b>→</b>	>	7	•	+	•	*	†	<i>&gt;</i>	<b>\</b>	<b>↓</b>	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		414	W	and the same of th	4	7		4	74		<b>4</b> î	7
Ideal Flow (vphpl)	1900		1900	1900		1900	1900		1900	1900		1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)		4.0		4,2,31	4.0	4.0		4.0	4.0	H FAMER	4.0	4.0
Lane Util. Factor	T 012 1 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0.95			1.00	1.00	- 113- 1. <del>1</del> - 1	1.00	1.00	Havillander.	1.00	1.00
	a shijji	- 0:99	ar in the contract of the cont	3 22 T	1.00	- 0.85	the year	1.00	0,85	j.	1.00	0,85
Flt Protected		0.99	Dr		1.00	1.00	and the second second	0.96	1.00	maken relation	0.96	1.00
Satd. Flow (prot)	1.147.84.1.149	3518		jura 194	1816	1561	4481	1826	1615	<b>4</b> 143.65	1771	1830
Flt Permitted	A. 10011100 A.A. 11 66	0.77			0.97	1.00	San A garage	0.74	1.00	* * * * * * * * * * * * * * * * * * *	0.75	1.00
Satd. Flow (perm)	40.101	2734			1758	1561		1413	1615		1376	1830
Volume (vph)	166	620	36	12	365	16	25	6	11	24	6	178
Peak-hour factor, PHF	<b>∞ 0.89</b>	0.89	0,89	0.85	0.85	0.85	0.60	0.60	0.60	€0.89	0,89	0.89
Adj. Flow (vph)	187	697	40	14	429	19	42	10	18	27	7	200
RTOR Reduction (vph)		5	. 0	0	. 0	€.7		. 0	15	101	. 0	162
Lane Group Flow (vph)	0	919	0	0	443	12	0	52	3	0	34	38
Heavy Vehicles (%)	0%	1%	4%	- 0%	1%	0%	0%	0%	<b>= 0%</b>	4%	0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases	Land	2			6		er <b>e</b> e e	4		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8	
Permitted Phases	2			6		6	4	***************************************	4	8		8
Actuated Green, G (s)		28.4		100 mm mm mm mm mm mm mm mm mm mm mm mm m	28.4	28.4		6.9	6.9		6.9	6.9
Effective Green, g (s)		30.4			30.4	30.4		8.9	8.9		8.9	8.9
Actuated g/C Ratio		0.64			0.64	0.64		0.19			0.19	0.19
Clearance Time (s)		6.0			6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1757			1130	1003		266	304		259	344
v/s Ratio Prot 🔠 🥏 🚟					ili i						AND THE PARTY OF T	
v/s Ratio Perm		c0.34			0.25	0.01		c0.04	0.00		0.02	0.02
v/c Ratio		0.52			0.39	0.01		0.20	⊋ 0.01		0.13	0.11
Uniform Delay, d1		4.5			4.0	3.0		16.2	15.6		16.0	15.9
Progression Factor		<i>,</i> 1.00			- 1,00	1.00	So The B	1.00	1,00		1:00	1.00
Incremental Delay, d2		0.3			0.2	0.0	TOTAL TOTAL	0.4	0.0		0.2	0.1
Delay (s)		4.8			4.3	3.0		16.5	15.6		16,2	16.1
Level of Service	. d en la mala la della della della	Α	an education of	ال محمدين	Α	Α	, iliş rigil remedir.	В	В	and the metallice	В	В
Approach Delay (s)		4.8			4.2			16.3		The state of the s	16.1	
Approach LOS		Α			А			В			В	
Intersection Summary				11917 78 11912 99 1192 99 1197 99	25 25 18 18 18 18 18 18 18 18 18 18 18 18 18		5 2 2	The second second			2	11 8 22 2
HCM Average Control [		ne, proto de more	6.7		ICM Le	vel of S	ervice		A			war to the
HCM Volume to Capac			0.45			The second secon	The second second		Marija (j			¥ai.
Actuated Cycle Length	*	min Latera	47.3			ost time			8.0			2.2
Intersection Capacity U	tilization		61:3%		CU Lev	el of Se	rvice		~ <b>B</b> ∍		200 g. 10 m.	ang terjir
Analysis Period (min)	i ili i santro di e	na in wasti	15				r Lygram.				water of the second	
c Critical Lane Group	Tanagani i								4444			

	۶	<b>→</b>	*	•		•	•	<b>†</b>	<i>&gt;</i>	<b>/</b>	<b>↓</b>	4
Movement	EBL	EBT	ÉBR	WBL	WBT	WBR	NB⊑	≣ NBT≣	NBR :	SBL	SBT	SBR
Lane Configurations		<b>*</b>	7	ኻ	*	77	72-01	4	7.4	ħ	Þ	
Ideal Flow (vphpl)	1900	1900 ·	1900		1900	1900	1900	1900	1900	1900		1900
Lane Width	10	10	10	9	9	9	10	10	11	11	11	11
Total Lost time (s)	on Tray Sug	4.0	4.0	4.0	4:0	4.0		4.0	4.0	4.0	-4.0	
Lane Util. Factor	Majora Acad was as a	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	• •
	in timi	1:00	0.85	1.00	1.00	0.85		1.00	0.85	1:00	0.97	
Flt Protected		1.00	1.00	0.95	1.00	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	init	1756	1492	1624	1693	1454		1677			1760	Air at
FIt Permitted		1.00	1.00	0.12	1.00	1.00		0.51	1.00	0.55	1.00	
Satd. Flow (perm)		1756	1492	210	1693	1454		896	1561	996	1760	
Volume (vph)	0	504	341	177	355	36	312	17	219	99	47	13
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0.89	0.89	- 0.92	0 92	200 100 000 000	0.85	0.85	0.85
Adj. Flow (vph)	0	630	426	199	399	40	339	18	238	116	55	15
RTOR Reduction (vph)	<b>Q</b> # ##	0.		0	Ō	18	. 0	- 0	68		13	0
Lane Group Flow (vph)	0	630	221	199	399	22	0	357	170	116	57	0
Heavy Vehicles (%)	0%	1%	1%	- 0%	1%	0%	1%	0%	0%	TE FOR U.	- 1%	1%
Turn Type			pm+ov			Perm	pm+pt		pm+ov	Perm		
Protected Phases	A CONTROL OF THE CONT	6	3	5	2		3	8	<b>5</b>	iji	4	
Permitted Phases			6	2		2	8		8	4		
Actuated Green, G (s)		-26.6	35.3			39.6		24.3		化多对氯化物 医直动	9.6	innei
Effective Green, g (s)		28.6	39.3	41.6	41.6	41.6		26.3	35.3	11.6	11.6	and the same
Actuated g/C Ratio		0.38	0.52	0.55	and the same of the same	0.55		0.35				
Clearance Time (s)	armen ar electric	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		25	3.0		4.21.2	11.	3.0		3.0	
Lane Grp Cap (vph)		662	851	283	928	797	74 1 7 July 100 1017	421	808	152	269	
v/s Ratio Prot		c0.36	0.04		. 0.24			c0.12	0.02		0.03	
v/s Ratio Perm		anang sa garang s	0.11	0.30	e is enjenigr <u>i</u> a	0.02	ou kome laguer a	c0.17	80.0	0.12		numay, ning
v/c Ratio	Action to the design of the control	0.95	0.26			2		0.85	0.21	2.700	0.21	
Uniform Delay, d1	55 W. Th. & 100 TV A.	23.0	10.2	14.2	10.1	7.9	r mala ideo	23.0	12.0	30.8	28.2	ara was a.
Progression Factor		1,00				2 MAY 2 TO 1 . 1 . 1		1.00	1.00	Table	1.00	1 Apr. 1
Incremental Delay, d2		23.6	0.2	7.7	0.3	0.0	continue at a second	14.6	0.1	20.0	0.4	e et letter jerlige
Delay (s)		46.6	10.4	21.9		7.9		37.6	pc co	50,9	28.6	
Level of Service	Reserva	D	В	С	B .aaaa	A	erana. Panggaran	D	В	D ≣	C NA E	Talife Aline
Approach Delay (s)		32:0			3 IO.9			21.4			42.5	RFTT
Approach LOS		C			Б			U			U	
Intersection Summary	10 1 40 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7		100		7 5 C 700 00 2 5 5 500 00 9 5 5 500 70	ALVA A N	A STATE OF THE STA	= = = = =	- 100 - 100	2 2 47.7 2 2 47.7	# 78 1 3 - # 78 1 3
HCM Average Control D		. 45% \	27.0		HCM Le	evel of S	ervice	elinek enim	C	La arroint	an the care	r vog alle
HCM Volume to Capacit			0.87							ritet:		right.
Actuated Cycle Length (		erini da	75.9			lost time		r gruss	12.0	orana asua	san and the	
Intersection Capacity Uti	lization	#F.F.	71.2%		ICH EeV	eloi Se	IVICE		- AC		va Mari	
Analysis Period (min)	igia jirila	الساعد وتوردي	15	1. <b></b>	T/12 + 3 - 4 +	istradu. T	ur italia			ger in the great	431 2359	gra .
e - Critical Lane Group					NAIA		Prei 1	es as the		i de la	great this	Pff

	<b>≯</b>	-	7	1	<b>←</b>	•	4	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	1
Movement	≣ ÉBL	EBT	ËBR	WBL	WBT	WBR	NBE	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<b>€</b> [}	2 3 11 52	4.44-14-15-3 24231	4	7		4	7		4	7
Ideal Flow (vphpl)	1900		1900	1900	1900	1900	1900		1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	16
Total Lost time (s)	taka 1963	4.0			4.0	4.0		4.0	<b>4.0</b>		4.0	4.0
Lane Util. Factor		0.95			1.00	1.00		1.00	1.00		1.00	1.00
		0,99	g king	eate ili.	1.00	-0.85		1.00	0,85	ratual.	1,00	0.85
Flt Protected		0.99			1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)		3518		îdanî û	1816	1561		1826	1615		1771	1830
FIt Permitted		0.77			0.97	1.00		0.74	1.00		0.74	1.00
Satd. Flow (perm)		2741		Seriji	1758	1561		1413	1615		1367	1830
Volume (vph)	166	620	36	12	365	16	25	6	11	24	6	178
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0:85		≨ 0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	187	697	40	14	429	19	42	10	18	27	7	200
RTOR Reduction (vph)	0	6	0	. 0	0	7.	<b>0</b>		15.	0	÷ 0.	163
Lane Group Flow (vph)	0	918	0	0	443	12	0	52	3	0	34	37
Heavy Vehicles (%)	0%	1%	4%	0%	1%	0%	0%	0%	0%	4%	0%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		2			6			4			8	- 20 72
Permitted Phases	2			6	T 11 313	6	4		4	8		8
Actuated Green, G (s)	1.71	28.2			28.2		reili	₹- 6.6¢	6.6	Plant Action 1	6.6	6.6
Effective Green, g (s)	wa ayanini	30.2	ramonis, e us	organia militara	30.2	30.2	on veneza, etc.	8.6	8.6	··· · · · · · · · · · · · · · · · · ·	8.6	8.6
Actuated g/C Ratio		0.65			0.65		A CONTRACTOR OF THE CONTRACTOR		0.18		0.18	0.18
Clearance Time (s)		6.0	tang mass time.		6.0	6.0	E 1-dest some	6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	instalves, s	1769		elli mere el milerari	1134	1007	aumstu tr. +7 .	260	297	a la alaman	251	336
v/s Ratio Prot							PATRICIA STATE OF THE STATE OF	a in in the second	The state of the s		20 10 10 10 10 10 10 10 10 10 10 10 10 10	
v/s Ratio Perm	೯೭ ೯೬೩ ಅಭಿಯ	c0.33	eregen i generalije i	s nomb, musque d	0.25	0.01	ng masayanang.	c0.04	0.00	ana na lias a	0.02	0.02
v/c Ratio	Hidist	0.52			0.39	0.01		0.20			0,14	0.11
Uniform Delay, d1		4.4	realização, p. 1.55 c.	a our pro-	3.9	3.0	ಯಾಗಿತ್ತು ಕಾರ್ಡ	16.2	15.6	era gazza e	16.0	15.9
Progression Factor		1.00			1.00	1.00		1.00			1.00	1 00
Incremental Delay, d2	Paul Palei et	0.3	2014 TE 54		0.2 4.2	0.0		0.4	0.0	en in de metali	0.2	0.1
Delay (s) Level of Service		4.7			4 Z	3.0		16.6	15.6		16.2	16.1
Level of Service	etanaa en j	A 7. i	#4714.0 A		A In Keess	A		B Jeo	В	arus sa	B aca	В
Approach Delay (s) Approach LOS	[]][]]	4.7 ^			: ان <del>ظاری</del> ۸			- 10.3 -			* * O. ]@	
			- Appril 10 Text 10 Te			7 W.					D	and the same of th
Intersection Summary						5.7 W				400 - 100	E DECEMBER OF THE	2
HCM Average Control D		ere i waart is ti	6.6	<b>-</b>	ICM Le	vel of S	ervice		ΑΑ		Town the state Mil.	22 E. BW.
HCM Volume to Capacit		Herri	0.45			la propertie						
Actuated Cycle Length (		Grantes P	46.8			lost time		- 28	8.0	anki bire	taka 100	5.50 27
Intersection Capacity Ut	ilization	y progra	61.3%	/	U Lev	erot Se	rvice ·	- 1.7 7 <b>5</b> 344	≢≛÷-B	Top + Souther f		graj Just
Analysis Period (min)	<u>.</u> 59€ 6.54€	eart galast	15	12 14 24		V 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and the second	.9	and the second	ali in trata		ia sa Mari
c Critical Lane Group.				Y 184								FRETTE .

# Appendix I – Roundabout Level of Service Analysis

Traffic Impact Study
Ulster Tech City GEIS
Town of Ulster, New York

Site: Enterprise Dr/Route 199 EB - 2014 Build - PM Peak (2 lane)

Enterprise Drive/Rt 199 EB Off Build 2014 - PM Peak Hour Roundabout

merader de M.	al Fla	orfkarmannan - Ved	iides								
		Celcrored Fibri		ran San	. Аледарі 119 жылы		istos idalai pyti Vadasia	Jedon Dhumiae	uribagini r Gudibo (\$	Madaki "" da Pilbo	Judiusa Spenis
		ingeka Erise - Mi	::::::::::::::::::::::::::::::::::::::								
8T	T	1535	1.0	0.532	5.7	LOS A	5.0	125.8	0.46	0.49	32.5
8R	R	495	2.0	0.328	5.1	LOS A	1.9	48.7	0.15	0.43	33.0
Approach		2030	1.2	0.532	5.5	LOS A	5.0	125.8	0.38	0.47	32.6
North	Er	iterprise Drive - SE	s de string	e de la companya de l	pri II	1000					ij.
7L	L	43	2.0	0.307	10.0	LOS B	0.0	0.0	0.00	1.05	29.7
4T	T	457	1.0	0.308	4.5	LOS A	0.0	0.0	0.00	0.38	35.3
Approach		500	1.1	0.308	5.0	LOS B	0.0	0.0	0.00	0.44	34.7
West	R	oute 209 EB Off Ra	mp - EB	Same and			a and the	1 + 1 + 4 + 4			4 11
5L	L	129	2.0	0.161	15.0	LOS B	0.9	23.7	0.54	0.77	28.3
Approach		129	2.0	0.160	15.0	LOS B	0.9	23.7	0.54	0.77	28.3
All Vehicle	Š	2658	1.3	0.532	5.9	LOS A	5.0	125.8	0.32	0.48	32.7

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 10:46:00 AM SIDRA INTERSECTION 4.0.8.970

Copyright @2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Route 199 EB.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/Route 199 EB - 2029 Build - PM Peak (2 lane)

Enterprise Drive/Rt 199 EB Off Build 2029 - PM Peak Hour Roundabout

Moveme	i Feriu	marca - Vahl	clus .						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
1,5,7,112		Territ		l   Luly		litaryddid Al Gardina	i 1904 Balta di Il Tarrichan	Chamilin IIII Bhalladhan	"	7 (1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		1.56									
Chult	Linker	cium Decem - Pilli									
• 8T	T	1680	1.0	0.596	5.9	LOS A	6.0	152.3	0.53	0.51	32.1
8R	R	530	2.0	0.350	5.1	LOS A	2.1	53.6	0.16	0.43	32.9
Approach		2210	1.2	0.596	5.7	LOS A	6.0	152.3	0.44	0.49	32.3
North	Enterp	rise Drive - SB		:	4.1	+ .+ _ + .+	. 1. 12			:	2
7L	L	49	2.0	0.342	10.0	LOS B	0.0	0.0	0.00	1.05	29.7
4T	T	507	1.0	0.342	4.5	LOS A	0.0	0.0	0.00	0.38	35.3
Approach		556	1.1	0.342	5.0	LOS B	0.0	0.0	0.00	0.44	34.7
West	Route	209 EB Off Ran	пр - EB	1 / T							
5L	L	150	2.0	0.195	15.5	LOS B	1.2	29.7	0.58	0.79	28.1
Approach		150	2.0	0.195	15.5	LOS B	1.2	29.7	0.58	0.79	28.1
All Vehicle	<b>S</b>	2915	1.2	0.596	6.1	LOS A	6.0	152.3	0.37	0.50	32.4

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 10:46:01 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Route 199 EB.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/Route 199 WB -2014 Build - PM Peak (1 lane)

Enterprise Drive/Rt 199 WB Build 2014 - PM Peak Hour Roundabout

Mawami	ul Pu	ifkormiuricu - 'afadil	cwa.								
	lii ii Tura	fi Cuntund i				"Thayes ra" Barana ka			Ping I	Employer	
								ji in			
<b>Territ</b>		erprise Crise AB						. * * * * * * * * * * * * * * * * * * *			
. 8T	T	671	1.0	0.545	6.0	LOS A	4.6	117.1	0.41	0.50	32.6
8R	R	830	1.0	0.662	6.2	LOS A	6.8	171.6	0.50	0.53	31.3
Approach		1501	1.0	0.662	6.1	LOS A	6.8	171.6	0.46	0.51	31.9
North	Ent	terprise Drive - SB				1 2002					
7L	L	135	1.0	0.391	10.2	LOS B	0.0	0.0	0.00	0.97	29.6
<u>4T</u>	T	495	1.0	0.390	4.7	LOS A	0.0	0.0	0.00	0.38	<b>3</b> 5.1
Approach		630	1.0	0.390	5.9	LOS B	0.0	0.0	0.00	0.51	33.8
West	Ro	ute 199 WB Off Rar	np - EB					s - 1 - 1 - 1			
2R	R	166	0.0	0.227	8.7	LOS A	1.4	35.2	0.62	0.73	26.0
Approach		166	0.0	0.227	8.7	LOS A	1.4	35.2	0.62	0.73	26.0
All Vehicle	s S	2298	0.9	0.662	6.2	LOS A	6.8	171.6	0.34	0.53	31.9

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM),

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM). Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 10:37:50 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Route 199 EB-WB.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/Route 199 WB - 2029 Build - PM Peak (1 Iane)

Enterprise Drive/Rt 199 WB Build 2029 - PM Peak Hour Roundabout

Mavene.	el Perí	omaruse - Vol	Tcles								
	11.11	Terralai Film		1149) 11414	Tenga L	Langett Jane		lonen Claureo	Propoli II) III Chinhand Ear	1900 640 1411 990	Aprilian Tymud
	Lih	ina line di									
8T	T	744	1.0	0.614	6.3	LOS A	5.7	144.8	0.49	0.53	32.2
8R	R	908	1.0	0.736	6.7	LOS A	8.6	215.9	0.61	0.57	30.8
Approach		1652	1.0	0.736	6.5	LOS A	8.6	215.9	0.55	0.55	31.4
North	Ente	rprise Drive - SB								1	
7L	L	158	1.0	0.443	10.2	LOS B	0.0	0.0	0.00	0.97	29.6
4T	Ţ	558	1.0	0.443	4.7	LOS A	0.0	0.0	0.00	0.38	35.1
Approach		715	1.0	0.443	5.9	LOS B	0.0	0.0	0.00	0.51	33.7
West	Rout	e 199 WB Off R	amp - EB								
2R	R	178	0.0	0.260	9.7	LOS A	1.7	41.8	0.67	0.78	25.6
Approach		178	0.0	0.260	9.7	LOS A	1.7	41.8	0.67	0.78	25.6
All Vehicle	es	2546	0.9	0.736	6.5	LOSA	8.6	215.9	0.41	0.56	31.5

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM), Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 10:37:51 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Route 199 EB-WB.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/Middle Drwy - 2014 Build - PM Peak (2 lane)

Enterprise Drive/Rt 209 WB Off/Middle Drwy Build 2014 - PM Peak Hour Roundabout

Moveme	int Park	amunco - 'a'	dicles								
		Maniferia (Mi		1111		Ti Linui uri		() Lewis (1917)		Wind Carl	
		* 1,4			l de la Company				12181281 11	ligi Pala	
8T	Т	1595	1.0	0.630	6.2	LOS A	6.4	161.9	0.52	0.53	32.1
8R	R	12	2.0	0.632	7.3	LOS A	6.4	161.9	0.51	0.63	31.2
Approach		1607	1.0	0.629	6.2	LOS A	6,4	161.9	0.52	0.53	32.0
East	Midd	le Driveway - V	VB		•					1.	
1L	L	43	2.0	0.143	17.6	LOS B	0.6	15.8	0.75	0.92	17.7
6R	R	434	2.0	0.787	15.3	LOS B	7.0	177.7	0.90	1.17	17.2
Approach		478	2.0	0.788	15.5	LOS B	7.0	177.7	0.89	1.15	17.3
North	Enter	prise Drive - S	В							ti ej	
7L	L	86	2.0	0.345	10.3	LOS B	2.9	72.1	0.21	0.85	29.6
4T	Τ	371	1.0	0.346	4.8	LOS A	2.9	72,1	0.21	0.38	33.8
Approach		457	1.2	0.346	5.8	LOS B	2.9	72.1	0.21	0.47	32.9
West	Route	209 EB Ōff R	tamp - EB			1 4 <u>51</u> 16					
5L	L	18	2.0	0.131	16.1	LOS B	0.7	18.2	0.58	0.90	28.3
<b>2</b> T	Т	58	0.0	0.131	5.7	LOS A	0.7	18.2	0.58	0.58	26.1
2R	R	458	2.0	0.446	6.5	LOS A	3.4	86.7	0.61	0.64	26.5
Approach		533	1.8	0.446	6.7	LOS B	3.4	86.7	0.61	0.64	26.5
All Vehicle	es	3074	1.3	0.787	7.7	LOS A	7.0	177.7	0.55	0.64	29.3

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 11:39:40 AM SIDRA INTERSECTION 4.0.8.970

Copyright @2000-2009 Akcelik & Associates Pty Ltd  $\underline{www.sidrasolutions.com}$ 

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Middle.SiP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/Middle Drwy - 2029 Build - PM Peak (2 Iane)

Enterprise Drive/Rt 209 WB Off/Middle Drwy Build 2029 - PM Peak Hour Roundabout

Моржинан	iil Par	Asemanase - Vet	nicing.								
							STEEL STEEL	Madad 1997 Pagarog 1	The T	Ariaili Marail	
		<b>Mark Criss</b> - N.	1466. MA								
8T	Τ	1784	1.0	0.701	6.4	LOS A	8.1	203.0	0.59	0.55	31.7
8R	R	12	2.0	0.706	7.5	LOSA	8.1	203.0	0.58	0.63	31.1
Approach		1796	1.0	0.701	6.4	LOS A	8.1	203.0	0.59	0.55	31.7
East	Mid	dle Driveway - W	В							:	
1L	L	43	2.0	0.162	18.6	LOS B	0.7	18.6	0.80	0.93	17.2
6R	R	434	2.0	0.903	25.4	LOS C	10.3	262.0	0.96	1.42	13.1
Approach		478	2.0	0.903	24.8	LOS C	10.3	262.0	0.95	1.38	13.4
North	Ente	erprise Drive - SB	1								
7L	L	86	2.0	0.380	10.3	LOS B	3.3	83.7	0.22	0.85	29.7
4T	Ţ	421	1.0	0.380	4.9	LOS A	3.3	83.7	0.22	0.38	33.7
Approach		507	1.2	0.381	5.8	LOS B	3.3	83.7	0.22	0.46	33.0
West	Rou	ite 209 EB Off Ra	imp - EB	· way		Terretoria en		. 34 1514	gia e je sa sa		est e est
5L	L	18	2.0	0.136	16.6	LOS B	8.0	19.2	0.60	0.91	28.0
2T	Т	58	0.0	0.136	6.2	LOS A	0.8	19.2	0.60	0.61	25.8
2R	R	520	2.0	0.526	7.6	LOS A	4.7	120.1	0.69	0.75	26.3
Approach		595	1.8	0.526	7.7	LOS B	4.7	120.1	0.68	0.74	26.3
All Vehicle	s	3375	1.3	0.903	9.1	LOSA	10.3	262.0	0.60	0.69	28.3

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 11:39:42 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Middle.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/South Drwy - 2014 Build - PM Peak (2 Iane)

Enterprise Drive/South Drwy Build 2014 - PM Peak Hour Roundabout

Mavuma	ri Park	erandaracan - 1740	Alichus								
Mr. D		Charling 13		195 221	Popologa Legar	i i jevet til Literatus	Tara Dalaya Taradan	Dinar Dinary	Thou E Galled S	ilasiya 19. Anto	Admingue Saviet
Erreft	in in it.	prince Crien - 14	innusinikinik J								
8T	T	1016	1.0	0.427	5.9	LOS A	3.4	85.0	0.45	0.51	25.1
8R	R	21	0.0	0.422	7.1	LOS A	3.4	85.0	0.44	0.64	22.4
Approach		1037	1.0	0.427	5.9	LOS A	3.4	85.0	0.45	0.51	25.1
East	South	n Driveway - W	В				•	* .		+ .	•
1L	L	61	0.0	0.651	17.6	LOS B	4.6	116.1	0.77	1.08	17.6
6T	T	1	0.0	0.588	8.7	LOSA	4.6	116.1	0.77	0.93	16.4
6R	R	318	0.0	0.651	11.1	LOS B	4.6	116.1	0.77	0.98	18.7
Approach		380	0.0	0.651	12.1	LOS B	4.6	116.1	0.77	0.99	18.5
North	Enter	prise Drive - SI	3					20.			
7L	L	117	0.0	0.649	10.8	LOS B	8.3	208.7	0.40	0.81	22.2
4T	T	735	1.0	0.648	5.0	LOS A	8.3	208.7	0.40	0.40	26.4
4R	_R	16	0.0	0.651	6.0	LOS A	8.3	208.7	0.40	0.51	24.0
Approach		869	0.8	0.648	5.8	LOS B	8.3	208.7	0.40	0.46	25.7
West	West	Campus Drwy	- EB				in the state of th		ng sa gula	. · · · · · · · · · · · · · · · · · · ·	
5L	L	80	3.0	0.258	17.6	LOS B	1.9	47.4	0.81	0.94	17.2
2T	T	2	0.0	0.250	8.8	LOS A	1.9	47.4	0.81	0.82	15.4
2R	R	48	0.0	0.258	11.3	LOS B	1.9	47.4	0.81	0.76	17.9
Approach		130	1.8	0.258	15.2	LOS B	1.9	47.4	0.81	0.87	17.4
All Vehicle	:S	2415	0.8	0.651	7.3	LOS A	8.3	208.7	0.50	0,59	23.5

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 11:32:39 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-South.SIP

8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/South Drwy - 2029 Build - PM Peak (2 lane)

Enterprise Drive/South Drwy Build 2029 - PM Peak Hour Roundabout

Maranno	ni Fed	amante - 7	mille					12.			
		May but									
Luci.	Erle	ruius Elipa - I								<u> </u>	
8T	T	1177	1.0	0.499	6.1	LOS A	4.3	109.5	0.51	0.52	24.6
8R	R	21	0.0	0.505	7.3	LOS A	4.3	109.5	0.51	0.66	22.2
Approach		1198	1.0	0.499	6.1	LOS A	4.3	109.5	0.51	0.53	24.6
East	Sout	h Driveway - V	VB								
1L	Ļ	61	0.0	0.728	20.0	LOS C	5.7	141.3	0.84	1.14	16.4
6T	T	1	0.0	0.588	11.2	LOS B	5.7	141.3	0.84	1.04	14.7
6R	R	318	0.0	0.727	13.6	LOS B	5.7	141.3	0.84	1.07	17.0
Approach		380	0.0	0.728	14.6	LOS C	5.7	141.3	0.84	1.08	16.9
North	Ente	rprise Drive - S	SB .				100			1	
7L	L	117	0.0	0.816	11.1	LOS B	15.9	399.1	0.62	0.69	22.4
4T	T	976	1.0	0.815	5.4	LOS A	15.9	399.1	0.62	0.43	24.6
4R	R	17	0.0	0.831	6.4	LOS A	15.9	399.1	0.62	0.49	23.0
Approach		1110	0.9	0.815	6.0	LOS B	15.9	399.1	0.62	0.46	24.3
West	Wes	t Campus Drw	y-EB	ing the state of t	r de la	er explanation		1000	en en en en en		
5L	L	92	3.0	0.462	27.8	LOS C	4.2	106.4	0.97	1.09	13.3
2T	T	2	0.0	0.500	19.0	LOS B	4.2	106.4	0.97	1.07	10.4
2R	Ŗ	56	0.0	0.463	21.5	LOS C	4.2	106.4	0.97	0.98	12.8
Approach		150	1.8	0.462	25.3	LOS C	4.2	106.4	0.97	1.05	13.1
All Vehicle	s	2838	0.9	0.831	8.2	LOS A	15.9	399.1	0.62	0.60	22.2

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 11:32:43 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-South.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

SIDRA ---INTERSECTION

Site: Enterprise Dr/Boices Lane - 2014 Build - PM Peak (1 lane)

Enterprise Drive/Boices Lane Build 2014 - PM Peak Hour Roundabout

Moveme	nt Paul	omininca - Va	likies								
				7.5		i je se in in in in		1.dud		Marian il	
		, with the									
1. Juli	likiini	dain View Coul									
3L	L	1	0.0	0.015	18.8	LOS B	0.1	2.1	0.76	0.85	19.1
8T	Т	1	0.0	0.015	11.2	LOS B	0.1	2.1	0.76	0.70	20.7
8R	R	3	0.0	0.015	12.4	LOS B	0.1	2.1	0.76	0.63	20.4
Approach	I	5	0.0	0.015	13.7	LOS B	0.1	2.1	0.76	0.70	20.1
East	Boice	es Lane - WB		• • • • • • • • • • • • • • • • • • • •			**			:	1 1 1 1
1L	L	1	0.0	0.098	12.3	LOS B	0.6	15.5	0.53	0.92	27.6
6T	Т	75	3.0	0.095	6.5	LOS A	0.6	15.5	0.53	0.57	30.7
6R	R	751	1.0	0.468	5.8	NA <sup>9</sup>	NA <sup>9</sup>	NA <sup>9</sup>	0.00	0.47	32.9
Approach	1	827	1.2	0.468	5.9	LOS B	0.6	15.5	0.05	0.48	32.7
North	Ente	rprise Drive - SI	3			4177					
. 7L	L	756	1.0	0.604	12.7	LOS B	6.6	166.5	0.40	0.63	20.9
<b>4</b> T	T	4	0.0	0.628	4.1	LOS A	6.6	166.5	0.40	0.34	21.5
4R	R	18	0.0	0.606	6.2	LOS A	6.6	166.5	0.40	0.45	23.7
Approach	l	778	1.0	0.604	12.5	LOS B	6.6	166.5	0.40	0.62	21.0
West	Boice	es Lane - EB	8 gg/2		e ger						
5L	L	376	0.0	0.483	18.3	LOS B	4.6	115.8	0.84	0.96	23.1
2T	T	344	0.0	0.501	12.0	LOS B	4.8	119.1	0.85	0.96	26.0
2R	R	2	0.0	0.463	14.7	LOS B	4.8	119.1	0.85	1.00	25.3
Approach	ı	722	0.0	0.501	15.3	LOS B	4.8	119.1	0.84	0.96	24.3
All Vehicl	es	2332	0.7	0.628	11.0	LOS B	6.6	166.5	0.41	0.68	26.3

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (HCM). Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

9 Continuous movement

Processed: Thursday, August 13, 2009 9:59:21 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Boices.SIP

8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Enterprise Dr/Boices Lane - 2029 Build - PM Peak (1 lane)

Enterprise Drive/Boices Lane Build 2029 - PM Peak Hour Roundabout

Movem	ed For	omianca - Veh	lelos								
					T. Alberta	larata.	Tayla Mara of C		Programme	14/11/1/44 // /	Tapatraja
										i'i i na iy I mir tali	
illusu <b>i</b> la	<b>til</b> wair	dain View Court	- Hilli								Manimits Vic
3L	L	1	0.0	0.020	23.1	LOS C	0.1	3.0	0.83	0.88	17.4
8 <b>T</b>	Т	1	0.0	0.020	15.5	LOS B	0.1	3.0	0.83	0.77	18.2
8R	R	3	0.0	0.020	16.7	LOS B	0.1	3.0	0.83	0.66	18.0
Approach	า	5	0.0	0.020	18.0	LOS C	0.1	3.0	0.83	0.74	17.9
East	Boice	es Lane - WB								2.4%	
1L	L	1	0.0	0.119	12.7	LOS B	0.8	20.7	0.60	0.92	27.5
6T	Т	88	3.0	0.120	7.0	LOS A	8.0	20.7	0.60	0.61	30.3
6R	R	866	1.0	0.540	5.8	NA <sup>9</sup>	NA <sup>9</sup>	NA <sup>9</sup>	0.00	0.47	32,9
Approach	า	955	1.2	0.540	6.0	LOS B	8.0	20.7	0.06	0.49	32.6
North	Ente	prise Drive - SB	jana .	- 1947					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Andrian	ing the second
7L	L	857	1.0	0.696	13.0	LOS B	9.0	226.4	0.52	0.62	20.6
4T	Т	5	0.0	0.687	4.4	LOS A	9.0	226.4	0.52	0.39	20.1
4R	R	20	0.0	0.706	6.4	LOS A	9.0	226.4	0.52	0.47	22.7
Approach	ı	882	1.0	0.696	12.8	LOS B	9.0	226.4	0.52	0.62	20.6
West	Boice	s Lane - EB			e projektiva	1 ta .		<i>3</i>			
5L	L	437	0.0	0.650	23.8	LOS C	8.3	207.2	0.98	1.14	20.5
2 <b>T</b>	Т	400	0.0	0.685	18.8	LOS B	8.6	215.3	0.98	1.16	21.7
2R	R	2	0.0	0.617	21.5	LOS C	8.6	215.3	0.98	1.17	21.4
Approach	า	839	0.0	0.684	21.4	LOSC	8.6	215.3	0.98	1.15	21.0
All Vehicl	les	2681	0.7	0.706	13.1	LOS B	9.0	226.4	0.50	0.74	24.7

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (HCM). Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

9 Continuous movement

Processed: Thursday, August 13, 2009 9:59:18 AM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Enterprise-Boices.SIP

8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Boices Lane/Middle Drwy/ Dalewood St - 2014 Build - PM Peak (1 lane)

Boices Lane/Middle Driveway/Dalewood Street Build 2014 - PM Peak Hour Roundabout

Moveme	nt Purk	eninalescas - Vag	distan	T. Transport			Tararam Pagramanan II	rum rum man			
Mile II		4,400 anvil - P					ATT HELLE Valtual	Calcalia Districta		i fina i per Anni Parine	
		and Steel - 1					491			17 11	
3L	L	7	0.0	0.043	19.4	LOS B	0.3	8.1	0.87	0.84	17.1
8T	Т	1	0.0	0.044	10.7	LOS B	0.3	8.1	0.87	0.75	15.7
8R	R	7	0.0	0.043	13.2	LOS B	0.3	8.1	0.87	0.67	17.9
Approach	)	15	0.0	0.043	15.9	LOS B	0.3	8.1	0.87	0.75	17.4
East	Boice	s lane - WB			٠.	n Na wana					
1L	L	11	0.0	0.566	10.5	LOS B	5.9	148.7	0.23	0.91	26.1
6T	Т	727	1.0	0.552	5.1	LOS A	5.9	148.7	0.23	0.40	30.9
6R	R	41	0.0	0.552	6.1	LOS A	5.9	148.7	0.23	0.54	28.8
Approach	1	778	0.9	0.552	5.3	LOS B	5.9	148.7	0.23	0.41	30.7
North	Middl	e Driveway - S	В								1 14 14 17
7L	L	120	0.0	0.241	15.7	LOS B	1.6	40.5	0.71	0.88	18.7
4T	Т	1	1.0	0.235	7.0	LOS A	1.6	40.5	0.71	0.71	18.3
4R	R	31	0.0	0.241	8.3	LOS A	1.6	40.5	0.71	0.69	18.0
Approach	1	152	0.0	0.241	14.1	LOS B	1.6	40.5	0.71	0.84	18.6
West	Boice	s Lane - EB	a table			i light be				*	
5L	L	26	0.0	0.799	12.3	LOS B	12.8	322.5	0.77	0.74	28.0
2T	T	914	1.0	0.806	6.9	LOS A	12.8	322.5	0.77	0.58	29.2
2R	R	<b>1</b> 1	0.0	0.785	7.9	LOS A	12.8	322.5	0.77	0.60	28.7
Approach	)	952	1.0	0.806	7.1	LOS B	12.8	322.5	0.77	0.59	29.1
All Vehicl	es	1897	0.9	0.806	7.0	LOS A	12.8	322.5	0.55	0.54	28.8

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM). Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 1:36:08 PM SIDRA INTERSECTION 4.0.8.970

Copyright ©2000-2009 Akcelik & Associates Pty Ltd www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Boices-Middle.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE

Site: Boices Lane/Middle Drwy/ Dalewood St - 2029 Build - PM Peak 

Boices Lane/Middle Driveway/Dalewood Street Build 2029 - PM Peak Hour Roundabout

Mawaara	ind Pas	formance - Vel	1791000						MA-14		
		TIMERINE CONTRACTOR		// Challe			"MWD114":	r Challer Till	TTT PIER TO		l'ala de de se
						a a a a a a a a a a a a a a a a a a a			, Cumad	Saprania.	, ដែរថា (ស៊ី)
Seati	imiuiui <b>mu</b> n Cisibi	racool Stragt - P.E			umikilikinia kan						
3L	L	7	0.0	0.062	23.3	LOS C	0.5	12,5	0.95	0.88	15.5
<b>8</b> T	Т	1	0.0	0.062	14.6	LOS B	0.5	12.5	0.95	0.85	13.6
8R	R	7	0.0	0.062	17.2	LOS B	0.5	12.5	0.95	0.71	15.8
Approach	1	15	0.0	0.062	19.8	LOS C	0.5	12.5	0.95	0.80	15.5
East	Boio	ces lane - WB				1	s				
1L	L	11	0.0	0.633	10.6	LOS B	7.9	199.3	0.28	0.88	26.1
<b>6</b> T	T	833	1.0	0.623	5.2	LOS A	7.9	199.3	0.28	0.40	30.6
6R	R	41	0.0	0.619	6.1	LOS A	7.9	199.3	0.28	0.53	28.7
Approach	1	885	0.9	0.623	5.3	LOS B	7.9	199.3	0.28	0.41	30.4
North	Mide	dle Driveway - SE	Bertak					salarsing			
7L	Ļ	120	0.0	0.271	17.1	LOS B	1.9	47.8	0.77	0.92	18.0
4T	T	1	1.0	0.294	8.4	LOS A	1.9	47.8	0.77	0.79	17.1
4R	R	31	0.0	0.271	9.7	LOS A	1.9	47.8	0.77	0.74	16.9
Approach	1	152	0.0	0.271	15.5	LOS B	1.9	47.8	0.77	0.88	17.8
West	Boic	es Lane - EB			exist and and		L NAME OF		4.0 4.1 (1.1)		7 9. j.
5L	Ļ	26	0.0	0.909	14.9	LOS B	22.4	564.3	1.00	0.69	26.6
2T	T	1042	1.0	0.907	9.6	LOS A	22.4	564.3	1.00	0.69	28.0
2R	R	11	0.0	0.916	10.5	LOS B	22.4	564.3	1.00	0.66	28.0
Approach	1	1079	1.0	0.907	9.7	LOS B	22.4	564.3	1.00	0.69	28.0
All Vehicl	es	2131	0.9	0.916	8.4	LOS A	22.4	564.3	0.68	0.59	28.0

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (HCM),

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout LOS Method: Same as Signalised Intersections.

Roundabout Capacity Model: SIDRA Standard.

Processed: Thursday, August 13, 2009 1:37:13 PM Copyright ©2000-2009 Akcelik & Associates Pty Ltd SIDRA INTERSECTION 4.0.8,970

www.sidrasolutions.com

Project: F:\Projects\2009\09-024d Ulster GEIS\traffic\Sidra\Boices-Middle.SIP 8000774, CREIGHTON MANNING ENGINEERING, SINGLE